Volume Contents 1998

NUMBER 1

Contents

v Tetrahedron prize for creativity in organic chemistry

vii Contributors to this issue

ix Graphical abstracts

TETRAHEDRON: ASYMMETRY REPORT NUMBER 32

A. K. Ghosh, P. Mathivanan and J. Cappiello 1 C_2-Symmetric chiral bis(oxazoline)–metal complexes in catalytic asymmetric synthesis

ARTICLES

K. K. Schumacher, J. Jiang and M. M. Joullié 47 Synthetic studies towards astins A, B and C. Efficient syntheses of *cis*-3,4-dihydroxyprolines and (–)-(3*S*,4*R*)-dichloroproline esters

C. Rosini, R. Ruzziconi, S. Superchi, F. Fringuelli and O. Piermatti 55 Circular dichroism spectra (350–185 nm) of a new series of 4-substituted [2.2]paracyclophanes: A quantitative analysis within the DeVoe polarizability model

Y. Lin and L.-C. Chien 63 Two methods for the resolution of 10,10′-dihydroxy-9,9′-biphenanthryl

K. Tanaka and H. Sawanishi 71 An efficient and stereospecific synthesis of (2*S*,4*S*)-2,4-diaminoglutaric acid

B. Grüner, I. Cisařová, A. Franken and J. Plešek 79 Resolution of the [6,6′-μ-$(CH_3)_2$P-(1,7-$(C_2B_9H_{10})_2$)-2-Co] bridged cobaltacarborane to enantiomers pure by chiral HPLC, circular dichroism spectra and absolute configurations by X-ray diffraction

S. Geresh, T. J. Valiyaveettil, Y. Lavie and A. Shani 89 Chemoenzymatic synthesis of (*R*)-(+)-2-methylbutan-1-ol, a chiral synthon for the preparation of optically active pheromones

A. Ikeda, Y. Suzuki and S. Shinkai 97 Chiral cage molecules generated by regioselective *O*-alkylation of a doubly-bridged calix[8]arene

A. Fishman and M. Zviely 107 Chemo-enzymatic synthesis of (*S*)-α-cyano-3-phenoxybenzyl alcohol

G. Porzi, S. Sandri and P. Verrocchio 119 Stereoselective synthesis of sterically constrained dipeptides. Part 2

J. T. Wasicak and W. A. Donaldson 133 Studies on the preparation of protomycinolide IV: Enantioselective synthesis of the C3–C9 segment

H. Y. Zhang, H. W. Yu, L. T. Ma, J. M. Min and L. H. Zhang 141 Synthesis of 2-C-(4-aminocarbonyl-2-thiazoyl)-1,4-anhydro-L-xylitols and their fluoro derivatives

L. Carrillo, D. Badía, E. Domínguez, F. Ortega and I. Tellitu 151 A contribution to the asymmetric synthesis of isoquinolines: Concise stereoselective approach to (3*S*,4*S*)-6,7-dimethoxy-4-hydroxy-3-phenyl-1,2,3,4-tetrahydroisoquinoline

M. Node, T. Inoue, M. Araki, D. Nakamura and K. Nishide 157 Lipase-catalyzed asymmetric demethoxycarbonylation: Formal syntheses of (+)-carbacyclin, (–)-ajmalicine, and (–)-tetrahydroalstonine

T. Laïb, J. Ouazzani and J. Zhu 169 Horse liver esterase catalyzed enantioselective hydrolysis of *N*,*O*-diacetyl-2-amino-1-arylethanol

A1 Stereochemistry abstracts

I Instructions to contributors

VII Cumulative author index

NUMBER 2

Contents

v Tetrahedron prize for creativity in organic chemistry

vii Contributors to this issue

ix Graphical abstracts

COMMUNICATIONS

N. Maezaki, A. Sakamoto, T. Tanaka and C. Iwata 179 Asymmetric desymmetrization of *meso*-cyclopentitol using a C_2-symmetric bis-sulfoxide: A synthesis of (–)-allosamizoline

T. Morimoto, N. Suzuki and K. Achiwa 183 Enantioselective synthesis of (*S*)-calycotomine employing catalytic asymmetric hydrogenation with an iridium(I)–(*R*)-BINAP–phthalimide complex

S. Otten, R. Fröhlich and G. Haufe 189 Synthesis and structural characterization of enantiopure (2*R*,5*R*)-(+)-2,5-dimethylthiolane

C. Pasquier, S. Naili, L. Pelinski, J. Brocard, A. Mortreux and F. Agbossou 193 Synthesis and application in enantioselective hydrogenation of new free and chromium complexed aminophosphine–phosphinite ligands

G. Prestat, A. Marchand, J. Lebreton, A. Guingant and J.-P. Pradère 197 ^{1}H NMR evaluation of the enantiomeric purity of a series of heterocyclic β-dimethylamino esters and amides by using (*S*)-mandelic acid derivatives as chiral solvating agents

ARTICLES

L. A. Noecker, J. A. Martino, P. J. Foley, D. M. Rush, R. M. Giuliano and F. J. Villani Jr. 203 Synthesis of amicetose by three enantioselective methods

S. Lavaire, R. Plantier-Royon and C. Portella 213 Stereoselectivity of the nucleophilic F-alkylation of carbonylated carbohydrates

M. Tichý, L. Ridvan, P. Holý, J. Závada, I. Císařová and J. Podlaha 227 Axially chiral dilactams. Synthesis, racemization barriers and crystal structures

H.-J. Gais, H. Eichelmann, N. Spalthoff, F. Gerhards, M. Frank and G. Raabe 235 Pd-catalyzed asymmetric synthesis of allylic *tert*-butyl sulfones and sulfides: Kinetic resolution of the allylic substrate by a chiral Pd-complex

M. T. Bartolomé, F. L. Buenadicha, C. Avendaño and M. Söllhuber 249 Stereochemical course of acylation and aldol condensation in (4*S*)-4-methyl-2-benzyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-diones

B. Malézieux, M. Gruselle, L. Troitskaya and V. Sokolov 259 Enantiospecific synthesis of 4-(4′-methoxyphenyl)-hexan-3-one as precursor for optically active (p*S*) or (p*R*) isomer of (*Z*) or (*E*)-3-(2′-((*N*,*N*-dimethylamino)methylferrocenyl)-4-(4″-methoxyphenyl)-hex-3-ene

G. Egri, A. Kolbert, J. Bálint, E. Fogassy, L. Novák and L. Poppe 271 Baker's yeast mediated stereoselective biotransformation of 1-acetoxy-3-aryloxypropan-2-ones

L. Antolini, A. Forni, P. Davoli, I. Moretti and F. Prati 285 Stereoselective synthesis and absolute configuration of (1′*R*,3*R*,4*R*)-4-acetoxy-3-(2′,2′,2′-trifluoro-1′-hydroxyethyl)azetidin-2-one

R. Rico, J. Zapico, F. Bermejo, S. B. Sanni and S. García-Granda 293 Novel stereocontrolled synthesis of the tricyclic lactone (1*R*,3*R*,6*R*,9*S*)-6,9-dimethyl-8-oxo-7-oxatricyclo[4.3.0.0^{3,9}]nonane

A. Fadel and A. Khesrani 305 A straightforward synthesis of both enantiomers of *allo*-norcoronamic acids and *allo*-coronamic acids, by asymmetric Strecker reaction from alkylcyclopropanone acetals

S. D. Bull, S. G. Davies and W. O. Moss 321 Practical synthesis of Schöllkopf's bis-lactim ether chiral auxiliary: (3*S*)-3,6-dihydro-2,5-dimethoxy-3-isopropyl-pyrazine

R. Kadyrov, D. Heller and R. Selke 329 New carbohydrate bisphosphites as chiral ligands

C. Chiappe, A. Cordoni, G. Lo Moro and C. D. Palese 341 Deracemization of (±)-*cis*-dialkyl substituted oxides via enantioconvergent hydrolysis catalysed by microsomal epoxide hydrolase

W. Adam, M. Lazarus, C. R. Saha-Möller and P. Schreier 351 Quantitative transformation of racemic 2-hydroxy acids into (*R*)-2-hydroxy acids by enantioselective oxidation with glycolate oxidase and subsequent reduction of 2-keto acids with D-lactate dehydrogenase

A21 Stereochemistry abstracts
I Instructions to contributors
VII Cumulative author index

NUMBER 3

Contents

v Tetrahedron prize for creativity in organic chemistry
vii Contributors to this issue
ix Graphical abstracts

TETRAHEDRON: ASYMMETRY REPORT NUMBER 33

S. G. Nelson 357 Catalyzed enantioselective aldol additions of latent enolate equivalents

COMMUNICATIONS

S. Gladiali, S. Pulacchini, D. Fabbri, M. Manassero and M. Sansoni 391 2-Diphenylphosphino-2′-diphenylphosphinyl-1,1′-binaphthalene (BINAPO), an axially chiral heterobidentate ligand for enantioselective catalysis

W. Adam, R. T. Fell, C. R. Saha-Möller and C.-G. Zhao 397 Synthesis of optically active α-hydroxy ketones by enantioselective oxidation of silyl enol ethers with a fructose-derived dioxirane

F. Schieweck and H.-J. Altenbach 403 Preparation of *S*-(–)-2-acetoxymethyl-2,5-dihydrofuran and *S*-(–)-*N*-Boc-2-hydroxymethyl-2,5-dihydropyrrole by enzymatic resolution

ARTICLES

H. Brunner, R. Störiko and B. Nuber 407 Enantioselective catalysis. Part 119: New chiral 2-(2-pyridinyl)oxazoline ligands containing an additional optically active substituent in the pyridine system

S.-K. Loh, J. J. Vittal and P.-H. Leung 423 1-Methyl-2-vinylpyrrole and 1-phenyl-3,4-dimethylphosphole: their coordination chemistries and reactivities in a chiral palladium complex promoted asymmetric Diels–Alder reaction

W. A. J. Starmans, R. G. Doppen, L. Thijs and B. Zwanenburg 429 Enzymatic resolution of methyl *N*-alkyl-azetidine-2-carboxylates by *Candida antarctica* lipase-mediated ammoniolysis

A. Laaziri, J. Uziel and S. Jugé 437 Electrophilic ring opening of oxazolines derived from serine and threonine: A practical entry to N(N)-protected β-halogeno α-aminoesters

E. Román, M. Baños, F. J. Higes and J. A. Serrano 449 Enantioselective synthesis of 1-nitrotricyclo[5,2,2,$0^{2,6}$]undeca-3,8-dienes via tandem consecutive asymmetric Diels–Alder reaction–Cope rearrangement

J. H. Lutje Spelberg, R. Rink, R. M. Kellogg and D. B. Janssen 459 Enantioselectivity of a recombinant epoxide hydrolase from *Agrobacterium radiobacter*

C. A. G. M. Weijers, A. L. Botes, M. S. van Dyk and J. A. M. de Bont 467 Enantioselective hydrolysis of unbranched aliphatic 1,2-epoxides by *Rhodotorula glutinis*

S. Lange, K. Wittmann, B. Gabor, R. Mynott and W. Leitner 475 Chiral discrimination at the η^3-allyl units of rhodium (I)^3 η -cyclooctenyl complexes containing chiral bidentate phosphanes

F. L. Buenadicha, M. T. Bartolomé, M. J. Aguirre, C. Avendaño and M. Söllhuber 483 New findings in the alkylation and N-deprotection of (4*S*)-4-methyl-2-benzyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-diones

A. Ritzén, B. Basu, S. K. Chattopadhyay, F. Dossa and T. Frejd 503 Synthesis of optically active arylene bis-alanine derivatives carrying orthogonal protecting groups

E. Forró, L. T. Kanerva and F. Fülöp 513 Lipase-catalysed resolution of 2-dialkylaminomethylcyclohexanols

S.-W. Chang, C.-Y. Hung, H.-H. Liu and B.-J. Uang 521 Enantioselective synthesis of γ-lactones from thioglycolic acid: Syntheses of (–)-muricatacin and 5-*epi*-(–)-muricatacin

A55 Stereochemistry abstracts
I Instructions to contributors
VII Cumulative author index

NUMBER 4

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

G. Chelucci, G. A. Pinna and A. Saba 531 Enantioselective palladium catalyzed allylic substitution with 2,2′-bipyridine ligands

H. L. Holland and F. M. Brown 535 Biocatalytic and chemical preparation of all four diastereomers of methionine sulfoxide

P. J. Pye and K. Rossen 539 A potential ambiguity in the stereochemical description of complex paracyclophanes

S. D. Pastor and S. P. Shum 543 Novel sterically congested chiral tripodal phosphite ligands: catalytic asymmetric hydrosilylation of ketones with a Rh(I)–TRISPHOS catalyst

T. Wirth, S. Häuptli and M. Leuenberger 547 Catalytic asymmetric oxyselenenylation–elimination reactions using chiral selenium compounds

ARTICLES

R. C. Lloyd, M. Dickman and J. B. Jones 551 Probing the specificity of the S_1', leaving group, site of subtilisin *Bacillus lentus* using an enzyme catalyzed transesterification reaction

K. Naemura, K. Nishioka, K. Ogasahara, Y. Nishikawa, K. Hirose and Y. Tobe 563 Preparation and temperature-dependent enantioselectivities of homochiral phenolic crown ethers having aryl chiral barriers: thermodynamic parameters for enantioselective complexation with chiral amines

D. Ma and J. Jiang 575 Polyfunctionalized pyrrolidinones via the coupling of N,N-disubstituted β-amino esters with ethyl glyoxalate

M. Ranchoux, J.-M. Brunel, G. Iacazio and G. Buono 581 Enzymatic desymmetrization of prochiral 2,3-bis(acetoxymethyl)bicyclo[2.2.1]hepta-2,5-diene and 2,3-bis(hydroxymethyl)bicyclo[2.2.1]hepta-2,5-diene

W. Adam, M. T. Díaz and C. R. Saha-Möller 589 Lipase-catalyzed kinetic resolution of *threo*-configured 1,2-diols: a comparative study of transesterification versus hydrolysis

J. M. Gardiner, J. H. Chughtai and I. H. Sadler 599 Synthesis and proof of stereostructure of a new (+)-isomenthone-derived homochiral 1,3-diol

R. Villard, F. Fotiadu and G. Buono 607 Highly diastereoselective synthesis of two analogues of dihydrosphingosine

J. I. Padrón and J. T. Vázquez 613 Stereochemical study of the CD spectral differences between anomers of alkyl glucopyranosides

P. Merino, A. Lanaspa, F. L. Merchan and T. Tejero 629 Totally stereocontrolled synthesis of α,β-diamino acids by addition of Grignard reagents to nitrones derived from L-serine

O. Bortolini, E. Casanova, G. Fantin, A. Medici, S. Poli and S. Hanau 647 Kinetic resolution of *vic*-diols by *Bacillus stearothermophilus* diacetyl reductase

V. Rozenberg, N. Dubrovina, E. Sergeeva, D. Antonov and Y. Belokon' 653 An improved synthesis of (*S*)-(+)- and (*R*)-(–)-[2.2]paracyclophane-4-carboxylic acid

P. Conti, C. Dallanoce, M. De Amici, C. De Micheli, G. Carrea and F. Zambianchi 657 Chemoenzymatic synthesis of the enantiomers of desoxymuscarine

G. Bringmann and M. Breuning 667 Enantioselective addition of diethylzinc to aldehydes using novel axially chiral 2-aminomethyl-1-(2′-hydroxyphenyl)naphthalene catalysts

K. Sørbye, C. Tautermann, P. Carlsen and A. Fiksdahl 681 *N,N*-1,2-Benzenedisulfonylimide, a new cyclic leaving group for the stereoselective nucleophilic substitution of amines

G. Giffels, J. Beliczey, M. Felder and U. Kragl 691 Polymer enlarged oxazaborolidines in a membrane reactor: enhancing effectivity by retention of the homogeneous catalyst

M. Franck-Neumann, D. Martina and D. Neff 697 Amplification of chirality by transition metal coordination: synthesis of chiral allenes and allene manganese complexes of high enantiomeric purity. Synthesis of methyl (*R*,*E*)-(–)-(2,4,5-tetradecatrienoate (pheromone of *Acanthoscelides obtectus* (say))

M. D. Millan and J. H. Davis Jr. 709 Hydroboration of (1*R*)-(+)-α-pinene and (1*S*)-(–)-β-pinene with $B_{10}H_{12}(SMe_2)_2$: a straightforward approach to the preparation of optically active 6-(alkyl)-*nido*-$B_{10}H_{13}$ derivatives

A79 Stereochemistry abstracts

I Instructions to contributors

VII Cumulative author index

NUMBER 5

Contents

v Contributors to this issue

vii Graphical abstracts

713 Corrigendum

TETRAHEDRON: ASYMMETRY REPORT NUMBER 34

E. Juaristi, J. Escalante, J. L. León-Romo and A. Reyes 715 Recent applications of α-phenylethylamine (α-PEA) in the preparation of enantiopure compounds. Part 1: Incorporation in chiral catalysts. Part 2: α-PEA and derivatives as resolving agents

COMMUNICATIONS

A. Saitoh, K. Achiwa and T. Morimoto 741 Enantioselective allylic substitutions using ketene silyl acetals catalyzed by a palladium–chiral amidine complex

G. Cravotto, G. B. Giovenzana, R. Pagliarin, G. Palmisano and M. Sisti 745 A straightforward entry into enantiomerically enriched β-amino-α-hydroxy-phosphonic acid derivatives

M. E. Humphries, B. P. Clark and J. M. J. Williams 749 α-Amino esters as nucleophiles in diastereoselective palladium catalysed allylic substitution reactions

J. C. Anderson, D. S. James and J. P. Mathias 753 Sulfur–imine mixed donor chelate ligands for asymmetric catalysis: enantioselective allylic alkylation

ARTICLES

J. M. Torres-Valencia, C. M. Cerda-García-Rojas and P. Joseph-Nathan 757 Enantioselective preparation of (2*R*,3*R*)-(+)- and (2*S*,3*S*)-(–)-2,3-epoxy-2-methylbutanoic acids and some derivatives

T. Ziegler, F. Bien and C. Jurisch 765 Chemoenzymatic synthesis of enantiomerically pure alkene 1,2-diols and glycosides thereof

F. Bien and T. Ziegler 781 Chemoenzymatic synthesis of glycosylated enantiomerically pure 4-pentene 1,2- and 1,3-diol derivatives

W. Adam, M. T. Díaz and C. R. Saha-Möller 791 Lipase-catalyzed kinetic resolution of α,β-unsaturated α′-acetoxy ketones

I. Baussanne, C. Travers and J. Royer 797 Asymmetric synthesis of 3-substituted pyrrolidones via α-alkylation of a chiral non-racemic γ-lactam

J. Syed, S. Förster and F. Effenberger 805 Application of the Blaise reaction: stereoselective synthesis of (4*R*)-*tert*-butyl 3-amino-4-trimethylsilyloxy-2-alkenoates from (*R*)-cyanohydrins

F. Effenberger and J. Syed 817 Stereoselective synthesis of biologically active tetronic acids

H. B. Mereyala and R. R. Gadikota 827 Transformation of D-glucose to 1-deoxy-1-[4′-methoxyphenyl]-2*R*,3*R*,4*R*-pentitol template: synthesis of Karalicin analogues

P. Camps, J. Contreras, M. Font-Bardia, J. Morral, D. Muñoz-Torrero and X. Solans 835 Enantioselective synthesis of tacrine–huperzine A hybrids. Preparative chiral MPLC separation of their racemic mixtures and absolute configuration assignments by X-ray diffraction analysis

Y. N. Belokon', K. A. Kochetkov, T. D. Churkina, N. S. Ikonnikov, A. A. Chesnokov, O. V. Larionov, V. S. Parmár, R. Kumar and H. B. Kagan	851	Asymmetric PTC *C*-alkylation mediated by TADDOL—novel route to enantiomerically enriched α-alkyl-α-amino acids
M. M. Cifuentes García, J. L. García Ruano, A. M. Martín Castro, J. H. Rodríguez Ramos and I. Fernández	859	Highly stereoselective hydrocyanation of optically pure α-sulfinylaldehydes
R. Ponsinet, G. Chassaing and S. Lavielle	865	Asymmetric synthesis of Boc-β^2-homophenylglycine
M. A. Brimble and C. K. Y. Lee	873	Asymmetric azo-ene reactions using the chiral azo-enophile di-(–)-(1*R*,2*S*)-2-phenyl-1-cyclohexyl diazenedicarboxylate
O. Parve, M. Aidnik, Ü. Lille, I. Martin, I. Vallikivi, L. Vares and T. Pehk	885	The tetrahydropyranyl-protected mandelic acid: a novel versatile chiral derivatising agent
	A109	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 6

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
E. Breysse, C. Pinel and M. Lemaire	897	Use of heterogenized-dialdimine ligands in asymmetric transfer hydrogenation
G. B. Jones, M. Guzel and B. J. Chapman	901	Refined enantioselective methylation catalysts: improved routes to bifunctional C5 synthons
H. Kajiro, S. Mitamura, A. Mori and T. Hiyama	907	Enantioselective synthesis of 2-hydroxy-1-indanone, a key precursor of enantiomerically pure 1-amino-2-indanol
K. Kato, H. Suzuki, H. Tanaka and T. Miyasaka	911	Enantio- and diastereoselective synthesis of 4′-α-substituted carbocyclic nucleosides
R. B. Greenwald, A. Pendri and H. Zhao	915	Stereoselective acylation of 20-(*S*)-camptothecin with amino acid derivatives using scandium triflate/DMAP
P. Ceccherelli, M. Curini, F. Epifano, M. C. Marcotullio and O. Rosati	919	Influence of a hydroxy group in the asymmetric reduction of selenides: enantioselective synthesis of naturally occurring monoterpenes
G. H. P. Roos and S. Balasubramaniam	923	Enhanced reactivity of tuned imidazolidin-2-one chiral auxiliaries in Diels–Alder reactions
		ARTICLES
I. C. F. Vasconcelos, G. K. Anderson, N. P. Rath and C. D. Spilling	927	Preparation and structure of new homochiral diazaphosphole ligands and their platinum(II) chloride complexes
I. C. F. Vasconcelos, N. P. Rath and C. D. Spilling	937	New homochiral amino-phosphine ligands: application in asymmetric palladium catalyzed allylic alkylation
J. Dupont and A. J. Donato	949	A concise synthesis of (*S*)-(+)-5,6-2*H*-pyran-2-one via hydrozirconation–carbonylation–demetallation of *O*-benzyl (*S*)-(–)-4-pentyn-2-ol
C. García-Martínez, Y. Taguchi, A. Oishi and K. Hayamizu	955	Ring current effects of phenyl and naphthyl groups: internal probes for determining the absolute configuration of chiral azetidin-2-ones by ^{1}H NMR
E. Caballero, C. Avendaño and J. C. Menéndez	967	Stereochemical issues related to the synthesis and reactivity of pyrazino[2′,1′-5,1]pyrrolo[2,3-*b*]indole-1,4-diones

C. E. Song, S. W. Lee, E. J. Roh, S. Lee and W.-K. Lee	983	A new synthetic route to (3*R*,4*S*)-3-hydroxy-4-phenylazetidin-2-one as a taxol side chain precursor
Z. Szakonyi, F. Fülöp, G. Bernáth, G. Török and A. Péter	993	Preparation of cycloalkane-fused dihydropyrimidin-4(3*H*)-one enantiomers
P. Phukan and A. Sudalai	1001	OsO_4-catalyzed amination of silyl enol ethers: enantioselective synthesis of α-amino ketones
T. Sugimura, H. Iguchi, R. Tsuchida, A. Tai, N. Nishiyama and T. Hakushi	1007	Diastereoface-differentiating oxidation of 1-cyclohexenyl ether using a 2,4-pentanediol tether
I. Izquierdo, M. T. Plaza, R. Robles and A. J. Mota	1015	A new and highly stereoselective synthesis of polyhydroxyindolizidines from 4-octulose derivatives
L. Canali, C. E. Song and D. C. Sherrington	1029	Polymer-supported bis-cinchona alkaloid ligands for asymmetric dihydroxylation of alkenes—a cautionary tale
A. S. Demir, C. Tanyeli, A. Cagir, M. N. Tahir and D. Ülku	1035	Novel enantioselective synthesis of *trans*-α-(2-carboxycycloprop-1-yl)-glycines: conformationally constrained L-glutamate analogues
J. Roos, U. Stelzer and F. Effenberger	1043	Synthesis of (1*R*,*cis*,α*S*)-cypermethrine via lipase catalyzed kinetic resolution of racemic *m*-phenoxybenzaldehyde cyanohydrin acetate
H. M. R. Hoffmann and O. Schrake	1051	Acylation and *O*-sulfonylation of Quincorine® and Quincoridine®. Efficient intramolecular catalysis
M. E. Tran Huu Dau, C. Riche, F. Dumas and J. d'Angelo	1059	The origin of the stereoselectivity in the asymmetric Michael reaction using chiral imines/secondary enamines under neutral conditions: a computational investigation
Y. Uozumi, K. Kato and T. Hayashi	1065	Asymmetric aza-Claisen rearrangement of allyl imidates catalyzed by homochiral cationic palladium(II) complexes
M. Bourghida and M. Widhalm	1073	Steric hindrance versus asymmetric induction: new PN-ligands for carbon–carbon coupling reactions
	A127	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 7

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
	1085	Corrigendum
		COMMUNICATIONS
X. Borde, C. Nugier-Chauvin, N. Noiret and H. Patin	1087	(*R*)- and (*S*)-α-Methoxy-(1-naphthyl) acetic acids: resolution by fractional crystallization and use for the NMR stereochemical analysis of alkylsulfoxides
Z. Shen, W. Huang, J. Feng and Y. Zhang	1091	Chiral oxazaborolidines bearing a 1- or 2-naphthylmethyl group as catalysts for the enantioselective borane reduction of ketones: experimental and quantum chemical calculations
K. Matoishi, A. Sano, N. Imai, T. Yamazaki, M. Yokoyama, T. Sugai and H. Ohta	1097	*Rhodococcus rhodochrous* IFO 15564-mediated hydrolysis of alicyclic nitriles and amides: stereoselectivity and use for kinetic resolution and asymmetrization
H. Frauenrath, S. Reim and A. Wiesner	1103	Asymmetric double-bond isomerization of cyclic allyl acetals by using diop and chiraphos modified nickel complexes
C. S. Ashvar, P. J. Stephens, T. Eggiman and H. Wieser	1107	Vibrational circular dichroism spectroscopy of chiral pheromones: frontalin (1,5-dimethyl-6,8-dioxabicyclo[3.2.1]octane)

M. Shaharuzzaman, J. Braddock-Wilking, J. S. Chickos, C. N. Tam, R. A. G. D. Silva and T. A. Keiderling	1111	The regiochemistry of reduction of mono-ethyl fumarate and maleate using a ruthenium BINAP catalyst
M. Breznik, A. Mrcina and D. Kikelj	1115	Enantioselective synthesis of (*R*)- and (*S*)-2-methyl-3-oxo-3,4-dihydro-2*H*-1,4-benzoxazine-2-carboxamides
M. Carda, E. Castillo, S. Rodríguez, J. Murga and J. A. Marco	1117	Stereoselective indium-mediated allylation of erythrulose derivatives in aqueous media
W. Adam, R. T. Fell, A. Lévai, T. Patonay, K. Peters, A. Simon and G. Tóth	1121	Enantioselective epoxidation of isoflavones by Jacobsen's Mn(III)salen catalysts and dimethyldioxirane oxygen-atom source
G. Guillena and C. Nájera	1125	(4*R*,5*S*)-1,5-Dimethyl-4-phenylimidazolidin-2-one as a chiral auxiliary for the diastereoselective alkylation of a new iminic glycine derivative: practical asymmetric synthesis of α-amino acids
V. Atlan, S. Racouchot, M. Rubin, C. Bremer, J. Ollivier, A. de Meijere and J. Salaün	1131	Diastereoselective palladium(0)-catalyzed azidation of 1-alkenylcyclopropyl esters: asymmetric synthesis of (–)-(1*R*,2*S*)-norcoronamic acid
		ARTICLES
D. Ma and J. Jiang	1137	Pd/Cu-catalyzed couplings of β-amino esters with aryl bromides. Synthesis of chiral 1,2,3,4-tetrahydro-4-oxo-2-alkyl-1-quinolines
L. Schwink, T. Ireland, K. Püntener and P. Knochel	1143	New C_2-symmetrical ferrocenyl diamines as ligands for ruthenium catalyzed transfer hydrogenation
H. Nishikori, K. Ito and T. Katsuki	1165	A short-step synthesis of *trans*-whisky lactone by an asymmetric Michael reaction
J. Drabowicz, B. Dudziński, M. Mikołajczyk, M. W. Wieczorek and W. R. Majzner	1171	Crystal and molecular structure of the levorotatory (1*R*,2*S*)-ephedrinium (*S*)-*t*-butylsulfinylacetate: a definitive proof of the absolute configuration of enantiomeric *t*-butyl methyl sulfoxides
F.-Y. Zhang and A. S. C. Chan	1179	Enantioselective conjugate addition of diethylzinc to cyclic enones catalyzed by chiral copper complexes containing a new phosphorus ligand with an H_8-binaphthoxy moiety
P. Kremminger and K. Undheim	1183	Synthesis of orthogonally protected hydroxylated azalkene-α,α′-bridged bis(α-glycine) and dihydroxylysine derivatives
G. Varadharaj, K. Hazell and C. D. Reeve	1191	An efficient preparative scale resolution of 3-phenylbutyric acid by lipase from *Burkholderia cepacia* (Chirazyme L1)
J. You, X. Yu, X. Li, Q. Yan and R. Xie	1197	Enantioselective hydrolysis of long chain α-amino acid esters by chiral sulfur-containing macrocyclic metallomicelles
G. Colombo, G. Ottolina, G. Carrea, A. Bernardi and C. Scolastico	1205	Application of structure-based thermodynamic calculations to the rationalization of the enantioselectivity of subtilisin in organic solvents
S. S. Kinderman and B. L. Feringa	1215	Asymmetric synthesis of acetomycin
A. Z.-Q. Khan, R. W. de Groot, P. I. Arvidsson and Ö. Davidsson	1223	A new chiral lithium amide based on (*S*)-2-[1-(3,3-dimethyl)pyrrolidinylmethyl]pyrrolidine—synthesis, NMR studies and use in the enantioselective deprotonation of cyclohexene oxide
K. Woydowski, B. Ziemer and J. Liebscher	1231	Optically active α-hydroxy-α-(tetrahydroquinoxalin-3-on-2-yl)esters by ring transformation of (*R*,*R*)-diethyl oxirane-2,3-dicarboxylate
M. A. Brimble, J. F. McEwan and P. Turner	1239	Asymmetric Diels–Alder addition of cyclopentadiene to chiral naphthoquinones
M. A. Brimble, J. F. McEwan and P. Turner	1257	Asymmetric Michael addition of 2-trimethylsilyloxyfuran to chiral naphthoquinones
P. A. Zunszain and O. Varela	1269	Straightforward synthesis of a derivative of purpurosamine C from D-galactose
	A153	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 8

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
	1277	Corrigendum
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 35
O. I. Kolodiazhnyi	1279	Asymmetric synthesis of organophosphorus compounds
		COMMUNICATIONS
N. Langlois	1333	Synthesis of the nonproteinogenic amino acid (2*S*,3*S*,4*S*)-3-hydroxy-4-methylproline, a constituent of echinocandins
B.-C. Chen, S. L. Quinlan, J. G. Reid, P. A. Jass, T. P. Robinson, W. A. Early, E. J. Delaney, M. J. Humora, G. D. Madding, J. J. Venit and W. J. Winter	1337	Regio- and stereoselective ring opening of epoxide with cyanoguanidine dianions, a facile synthesis of the K_{ATP} opener BMS-180448
N. Sewald and V. Wendisch	1341	Enantioselective copper(I) catalyzed 1,4-addition of diethylzinc to nitroolefins
		ARTICLES
S. Sankaranarayanan and S. Chattopadhyay	1345	Asymmetric synthesis of a cytotoxic amide of *Telesto riisei*
M. Furuyama and I. Shimizu	1351	A short enantioselective synthesis of a component of cryptophycin A and arenastatin A
C. André, J. Bolte and C. Demuynck	1359	Syntheses of L-threose and D-erythrose analogues modified at position 2
J. Harren, A. Sobanski, M. Nieger, C. Yamamoto, Y. Okamoto and F. Vögtle	1369	A triple layered helical chiral cyclophane—one-pot synthesis, enantiomer separation and chiroptical properties
W. Gu, X. She, X. Pan and T.-K. Yang	1377	Enantioselective syntheses of (*S*)- and (*R*)-8,9-dihydroxydihydromagnolol
G. Fontana, P. Manitto, G. Speranza and S. Zanzola	1381	Enantioselectivity in the reduction of tricyclic hydroaromatic ketones by baker's yeast
F. Molinari, E. G. Occhiato, F. Aragozzini and A. Guarna	1389	Microbial biotransformations in water/organic solvent system. Enantioselective reduction of aromatic β- and γ-nitroketones
A. T. Ung and S. G. Pyne	1395	Asymmetric synthesis of (1*R*,2*S*,3*R*)-2-acetyl-4-(1,2,3,4-tetrahydroxybutyl)-thiazole
M. Kossenjans and J. Martens	1409	Synthesis of C_2-symmetrical bis-β-amino alcohols from (*R*)-cysteine and their application in enantioselective catalysis
M. Falorni, G. Dettori and G. Giacomelli	1419	Synthesis of new oxazole-containing peptidomimetics
J. Clayden, C. McCarthy and J. G. Cumming	1427	(*S*)-2-(Dibenzylamino)-3-phenylpropanal as a chiral auxiliary: a new strategy for the asymmetric synthesis of 2-substituted alcohols
W. Wu and Y. Zhang	1441	Enantioselective synthesis of α-amino acids in chiral reverse micelles
T. Morita, T. Arai, H. Sasai and M. Shibasaki	1445	Utilization of heterobimetallic complexes as Lewis acids
T. Taniguchi, M. Takeuchi and K. Ogasawara	1451	A furan route to (–)-*exo*-isobrevicomin
	A177	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 9

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 36
L. Pu	1457	Recent developments in asymmetric catalysis using synthetic polymers with main chain chirality
		COMMUNICATIONS
A. Mandoli, D. Pini, S. Orlandi, F. Mazzini and P. Salvadori	1479	A first example of macromolecular Ti(IV) Lewis acid in the catalytic enantioselective Mukaiyama reaction
S. D. Bull, S. G. Davies, D. J. Fox and T. G. R. Sellers	1483	Chiral relay effects influence the facial selectivity of *N*-alkylated 5-phenylmorpholin-2-one enolates
B. T. Cho and Y. S. Chun	1489	Enantioselective addition of diethylzinc to aldehydes catalyzed by a new chiral β-amino alcohol derived from D-mannitol
M. Tabcheh, C. Guibourdenche, L. Pappalardo, M.-L. Roumestant and P. Viallefont	1493	Diastereoselective protonation of enolates of chiral Schiff bases
		ARTICLES
C. Baldoli, P. Del Buttero, S. Maiorana, G. Ottolina and S. Riva	1497	Studies on enantiotopic differentiation in the horse liver alcohol dehydrogenase catalysed reduction of chiral tricarbonyl(η^6-benzaldehyde)-chromium complexes
K. Beck-Piotraschke and H.-D. Jakubke	1505	Protease-catalysed synthesis of peptides containing histidine and lysine
H.-J. Altenbach and G. Blanda	1519	A novel building block for the synthesis of isofagomin analogues
Z. Xiong, G. Zhou, J. Yang, Y. Chen and Y. Li	1525	An efficient stereocontrolled synthesis of (–)-10-*epi*-5β,11-dihydroxyeudesmane and (–)-4,10-*epi*-5β,11-dihydroxyeudesmane
J.-D. Charrier, A. Reliquet and J. C. Meslin	1531	Diastereoselective synthesis of 3,6-dihydro-2*H*-1,3,4-thiadiazines
P. Moussou, A. Archelas, J. Baratti and R. Furstoss	1539	Microbiological transformations. Part 39: Determination of the regioselectivity occurring during oxirane ring opening by epoxide hydrolases: a theoretical analysis and a new method for its determination
M. Hartl and H.-U. Humpf	1549	Assigning the absolute configuration of fumonisins by the circular dichroism exciton chirality method
G. Zhao, Q.-G. Wang and T. C. W. Mak	1557	Isolation and absolute configurations of diastereomers of a dimeric chloro-bridged planar chiral cyclopalladated derivative of ferrocene
J. K. Karjalainen, O. E. O. Hormi and D. C. Sherrington	1563	Highly efficient heterogeneous polymer-supported Sharpless alkene epoxidation catalysts
M. C. Aversa, A. Barattucci, P. Bonaccorsi, P. Giannetto, M. Panzalorto and S. Rizzo	1577	Diels–Alder reactions of (R_S)-3-[(1*S*)-isoborneol-10-sulfinyl]-1-methoxybuta-1,3-dienes with electron-deficient carbodienophiles. The effects of Lewis acid catalysis
J. Aleu, G. Fronza, C. Fuganti, V. Perozzo and S. Serra	1589	On the baker's yeast mediated transformation of α-bromoenones. Synthesis of (1*S*,2*R*)-2-bromoindan-1-ol and (2*S*,3*S*)-3-bromo-4-phenylbutan-2-ol
S. Nazabadioko, R. J. Pérez, R. Brieva and V. Gotor	1597	Chemoenzymatic synthesis of (*S*)-2-cyanopiperidine, a key intermediate in the route to (*S*)-pipecolic acid and 2-substituted piperidine alkaloids
E. Brown, C. Deroye and J. Touet	1605	Synthesis of versatile chiral intermediates by enantioselective conjugate addition of alkenyl Grignard reagents to enamides deriving from (*R*)-(–)- or (*S*)-(+)-2-aminobutan-1-ol
M. D. Rozwadowska	1615	A concise synthesis of (*R*)-(+)-phenylalaninol from (1*S*,2*S*)-(+)-thiomicamine
J.-M. Devaux, J. Goré and J.-M. Vatèle	1619	Enantioselective synthesis of 2-allyl and 2-(3-trimethylsilylpropargyl)-2-hydroxycyclohexanone using osmium-catalyzed asymmetric dihydroxylation
Z. Łotowski, J. W. Morzycki and R. R. Siciński	1627	Preparation of 7α- and 7β-methylcholestane derivatives by kinetic separation of the diastereomeric mixture

A201 Stereochemistry abstracts

I Instructions to contributors

V Cumulative author index

NUMBER 10

Contents

v Contributors to this issue

vii Graphical abstracts

1635 Corrigendum

COMMUNICATIONS

H.-L. Huang, L. T. Liu, S.-F. Chen and H. Ku 1637 The synthesis of a chiral fluoxetine intermediate by catalytic enantioselective hydrogenation of benzoylacetamide

B.-C. Chen, M. S. Bednarz, O. R. Kocy and J. E. Sundeen 1641 A new highly enantioselective synthesis of both (*R*)- and (*S*)-2-mercaptosuccinic acids

O. I. Kolodiazhnyi, E. V. Grishkun, S. Sheiko, O. Demchuk, H. Thoennessen, P. G. Jones and R. Schmutzler 1645 Chiral symmetric phosphoric acid esters as sources of optically active organophosphorus compounds

F. Xu, R. D. Tillyer, D. M. Tschaen, E. J. J. Grabowski and P. J. Reider 1651 Enantioselective 1,4-addition of aryllithium reagents to α,β-unsaturated *tert*-butyl esters in the presence of chiral additives

M. Amadji, D. Cahard, J.-D. Moriggi, L. Toupet and J.-C. Plaquevent 1657 Chirons in the 1,3-dioxane series: stereospecific cross-coupling reactions and chirality transfers

ARTICLES

A. Flores-Parra, P. Suárez-Moreno, S. A. Sánchez-Ruíz, M. Tlahuextl, J. Jaen-Gaspar, H. Tlahuext, R. Salas-Coronado, A. Cruz, H. Nöth and R. Contreras 1661 Chlorination reactions of ephedrines revisited. Stereochemistry and functional groups effect on the reaction mechanisms

A. S. Demir, H. Hamamci, C. Tanyeli, I. M. Akhmedov and F. Doganel 1673 Synthesis and *Rhizopus oryzae* mediated enantioselective hydrolysis of α-acetoxy aryl alkyl ketones

J. A. Marco, M. Carda, J. Murga, S. Rodríguez, E. Falomir and M. Oliva 1679 Diastereoselectivity of the reactions of organolithium reagents with protected erythrulose oximes

M. Carda, J. Murga, S. Rodríguez, F. González, E. Castillo and J. A. Marco 1703 Stereoselective synthesis of α-substituted serines from protected erythrulose oximes

S. Yamada, K. Morimatsu, R. Yoshioka, Y. Ozaki and H. Seko 1713 First practical resolution of a 3-(4-methoxyphenyl)glycidic acid ester by preferential crystallization and synthesis of diltiazem

J. E. Oliver and W. F. Schmidt 1723 Chiral 3-(hydroxymethyl)oxiranecarboxylic acids via the Jocic reaction

T. Isobe, K. Fukuda and T. Ishikawa 1729 Simple preparation of chiral 1,3-dimethyl-2-iminoimidazolidines (monocyclic guanidines) and applications to asymmetric alkylative esterification

A. García Martínez, E. Teso Vilar, A. García Fraile, S. de la Moya Cerero and P. Martínez Ruiz 1737 Synthesis of enantiopure norbornane derivatives. Effect of bridgehead substituent on the π-facial selectivity of the reduction of 2-norbornanones and their oximes

X.-L. Hou, J. Wu, L.-X. Dai, L.-J. Xia and M.-H. Tang 1747 Desymmetric ring-opening of *meso*-epoxides with anilines: a simple way to chiral β-amino alcohols

L. Lecointe, V. Rolland-Fulcrand, M. L. Roumestant, Ph. Viallefont and J. Martinez 1753 Chemoenzymatic synthesis of the two enantiomers of 7-azatryptophan

P. Merino, E. Castillo, S. Franco, F. L. Merchan and T. Tejero 1759 Ready access to enantiopure 5-substituted-3-pyrrolin-2-ones from *N*-benzyl-2,3-*O*-isopropylidene-D-glyceraldehyde nitrone (BIGN)

D. T. Gryko, P. Piątek, P. Sałański and J. Jurczak	1771	The use of the Mitsunobu reaction in preparation of chiral synthons for macrocyclic frameworks
M. Ogasawara, K. Yoshida, H. Kamei, K. Katc, Y. Uozumi and T. Hayashi	1779	Synthesis and application of novel chiral phosphino-oxazoline ligands with 1,1′-binaphthyl skeleton
H. Akita, M. Nozawa and H. Shimizu	1789	Synthesis of decalin type chiral synthons based on enzymatic functionalisation and their application to the synthesis of (–)-ambrox and (+)-zonarol
V. K. Aggarwal, J. G. Ford, R. V. H. Jones and R. Fieldhouse	1801	Camphor derived 1,4-oxathianes for carbonyl epoxidation
L. Carrillo, D. Badía, E. Domínguez, I. Tellitu and J. L. Vicario	1809	Stereochemical studies on the synthesis of 1,2,3,4-tetrahydroisoquinolin-4-ols
L. Palombi, F. Bonadies, A. Pazienza and A. Scettri	1817	A convenient approach to chiral sulfoxides by enantioselective oxidation with a steroidal furylhydroperoxide
D. Gardette, Y. Gelas-Mialhe, J.-C. Gramain, B. Perrin and R. Remuson	1823	Enantioselective synthesis of the quinolizidine alkaloids (+)-myrtine and (–)-epimyrtine
	A225	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 11

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
	1829	Corrigendum
		COMMUNICATIONS
N. I. Bowers, D. R. Boyd, N. D. Sharma, M. A. Kennedy, G. N. Sheldrake and H. Dalton	1831	Stereoselective *cis*-dihydroxylation of azulene and related non-aromatic polyenes
S. Han, G. Lin and Z. Li	1835	Synthesis of (*R*)-cyanohydrins by crude (*R*)-oxynitrilase-catalyzed reactions in micro-aqueous medium
M. Cleij, A. Archelas and R. Furstoss	1839	Microbiological transformations. Part 42: A two-liquid-phase preparative scale process for an epoxide hydrolase catalysed resolution of *para*-bromo-α-methyl styrene oxide. Occurrence of a surprising enantioselectivity enhancement
P. S. Savle, M. J. Lamoreaux, J. F. Berry and R. D. Gandour	1843	A convenient resolution of long-chain alkyl epoxides with Jacobsen's salen(Co)III(OAc) catalysts
S. Jamal Aboulhoda, I. Reiners, J. Wilken, F. Hénin, J. Martens and J. Muzart	1847	β-Amino tertiary cycloalkanols for the enantioselective protonation of enolic species produced by a palladium-induced cascade reaction
H. Koshima, S. I. Khan and M. A. Garcia-Garibay	1851	Chiral crystalline salts from achiral biphenylcarboxylic acids and tryptamine
J. J. Wen and C. M. Crews	1855	Synthesis of 9-fluorenylmethoxycarbonyl-protected amino aldehydes
G. Guanti, E. Narisano and R. Riva	1859	Lipase mediated preparation of differently protected homochiral 2-aryl-2-fluoro-1,3-propanediols
M. Hayashi, Y. Hashimoto, H. Takezaki, Y. Watanabe and K. Saigo	1863	A novel optically active bisphosphine ligand CDP, derived from an anti head-to-head coumarin dimer: synthesis and application to the rhodium-catalyzed asymmetric hydrogenation of arylenamides
U. Englert, A. Salzer and D. Vasen	1867	Enantiospecific nucleophilic substitution of the dimethylamino group in (*R*)-tricarbonyl[-{(1-dimethylamino)ethyl}-η^6-benzene]chromium

ARTICLES

P. Lesot, D. Merlet, A. Loewenstein and J. Courtieu 1871 Enantiomeric visualization using proton-decoupled natural abundance deuterium NMR in poly(γ-benzyl-L-glutamate) liquid crystalline solutions

M. A. Hena, S. Terauchi, C.-S. Kim, M. Horiike and S. Kiyooka 1883 Highly enantioselective synthesis of *syn*- and *anti*-propionate aldols without diastereoselection in the chiral oxazaborolidinone-promoted aldol reaction with a silyl ketene acetal derived from ethyl 2-(methylthio)propionate

Z. Hameršak, A. Selestrin, A. Lesac and V. Šunjić 1891 Conformational study of α-arylethylamides of (–)-camphanic acid

J. Beecher and A. Willetts 1899 Biotransformation of organic sulfides. Predictive active site models for sulfoxidation catalysed by 2,5-diketocamphane 1,2-monooxygenase and 3,6-diketocamphane 1,6-monooxygenase, enantiocomplementary enzymes from *Pseudomonas putida* NCIMB 10007

V. V. Dunina, L. G. Kuz'mina, A. G. Parfyonov and Yu. K. Grishin 1917 Stereospecific co-crystallization of reactant and palladium complex in the resolution of stilbendiamine using N*-chiral *ortho*-palladated matrix

Y. Chen, Z. Xiong, G. Zhou, L. Liu and Y. Li 1923 Total synthesis and stereochemistry of 13-hydroxy-α-eudesmol

C. Botuha, M. Haddad and M. Larchevêque 1929 Synthesis of *R*-(–)-2-phenylpropanal: a potentially new route towards chiral 2-phenylalkanals

G. Chelucci, D. Berta, D. Fabbri, G. A. Pinna, A. Saba and F. Ulgheri 1933 Enantioselective addition of diethylzinc to benzaldehyde in the presence of sulfur-containing pyridine ligands

J.-M. Brunel, T. O. Luukas and H. B. Kagan 1941 Nonlinear effects as 'indicators' in the tuning of asymmetric catalysts

A. Cawley, J. P. Duxbury and T. P. Kee 1947 NMR determination of enantiopurity via chiral derivatisation. $de_{(measured)} = ee_{(substrate)}$?

F. Sánchez-Sancho and B. Herradón 1951 Short syntheses of (*S*)-pipecolic acid, (*R*)-coniine, and (*S*)-δ-coniceine using biocatalytically-generated chiral building blocks

A. López and R. Pleixats 1967 Highly diastereoselective monoalkylation and Michael addition of *N*-(diphenylmethylene)glycinesultam under solid–liquid phase-transfer catalysis conditions using potassium carbonate as base

H. Ito, A. Saito and T. Taguchi 1979 Asymmetric Diels–Alder reactions of 2-fluoroacrylic acid derivatives. Part 1: The construction of fluorine substituted chiral tertiary carbon

H. Ito, A. Saito and T. Taguchi 1989 Asymmetric Diels–Alder reactions of 2-fluoroacrylic acid derivatives. Part 2: A remarkable effect of fluorine substituent on the diastereoselectivity

J. E. H. Buston, I. Coldham and K. R. Mulholland 1995 Studies into the asymmetric Meisenheimer rearrangement

A269 Stereochemistry abstracts

I Tetrahedron: *Asymmetry* reports

III Instructions to contributors

IX Cumulative author index

NUMBER 12

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

L. E. Brammer Jr. and T. Hudlicky 2011 Inositol synthesis: concise preparation of L-*chiro*-inositol and *muco*-inositol from a common intermediate

D. J. Bayston, C. B. Travers and M. E. C. Polywka 2015 Synthesis and evaluation of a chiral heterogeneous transfer hydrogenation catalyst

J. K. Karjalainen, O. E. O. Hormi and D. C. Sherrington	2019	Heterogeneous asymmetric epoxidation of *cis*-allylic alcohols: use of polymer-supported Ti(IV)-catalyst
G. B. Jones and M. Guzel	2023	Enantioselective cycloadditions catalyzed by face resolved arene chromium carbonyl complexes
		ARTICLES
D. Gnecco, C. Marazano, R. G. Enríquez, J. L. Terán, M. del Rayo Sánchez S. and A. Galindo	2027	Oxidation of chiral non-racemic pyridinium salts to enantiopure 2-pyridone and 3-alkyl-2-pyridones
S. Pinheiro, F. M. C. de Farias, A. S. Saraiva and M. P. A. Campos	2031	A short asymmetric synthesis of 4,4-disubstituted-γ-butyrolactones from racemic 2-methylcyclohexanone in multigram scale
H. Mahmoud, Y. Han, B. M. Segal and L. Cai	2035	Chiral enrichment of 2-amino-2′-hydroxy-1,1′-binaphthyl
D. W. Armstrong, J. T. Lee and L. W. Chang	2043	Enantiomeric impurities in chiral catalysts, auxiliaries and synthons used in enantioselective synthesis
P. Camps, F. Pérez and N. Soldevilla	2065	(*R*)- and (*S*)-3-Hydroxy-4,4-dimethyl-1-phenyl-2-pyrrolidinone as chiral auxiliaries in the enantioselective preparation of α-aryloxypropanoic acid herbicides and α-chlorocarboxylic acids
W. G. Jary and J. Baumgartner	2081	Asymmetric dihydroxylation reactions leading to novel chiral ferrocene derivatives
M. Murakata, T. Jono and O. Hoshino	2087	Enantioselective radical-mediated allylation of α-iododihydrocoumarins using Lewis acids generated from chiral sulfonamides
C. Anaya de Parrodi, G. E. Moreno, L. Quintero and E. Juaristi	2093	Application of phosphorylated reagents derived from *N,N′*-di-[(*S*)-α-phenylethyl]-cyclohexane-1,2-diamines in the determination of the enantiomeric purity of chiral alcohols
H. Tamiaki, M. Kouraba, K. Takeda, S. Kondo and R. Tanikaga	2101	Asymmetric synthesis of methyl bacteriopheophorbide-*d* and analogues by stereoselective reduction of the 3-acetyl to the 3-(1-hydroxyethyl) group
D. Colombo, F. Ronchetti, A. Scala and L. Toma	2113	Bioactive glycoglycerolipid analogues: an expeditious enzymatic approach to mono- and diesters of 2-*O*-β-D-galactosylglycerol
S. Collet, P. Bauchat, R. Danion-Bougot and D. Danion	2121	Stereoselective, nonracemic synthesis of ω-borono-α-amino acids
M. Prashad, D. Har, O. Repic, T. J. Blacklock and P. Giannousis	2133	Enzymatic resolution of (±)-*threo*-methylphenidate
J. C. Estevez, J. W. Burton, R. J. Estevez, H. Ardron, M. R. Wormald, R. A. Dwek, D. Brown and G. W. J. Fleet	2137	Spirodiketopiperazines of mannofuranose: carbopeptoid α-amino acid esters at the anomeric position of mannofuranose
D. Enders, R. Maaßen and J. Runsink	2155	First asymmetric nucleophilic displacement reactions on chiral α-substituted aldehyde hydrazones
P. Bataille, M. Paterne and E. Brown	2181	Enantioselective syntheses of α-phenylalkanamines via intermediate addition of Grignard reagents to chiral hydrazones derived from (*R*)-(–)-2-amino-butan-1-ol
	A297	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 13

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

P. Ferraboschi, S. Rezaelahi, E. Verza and E. Santaniello	2193	Lipase-catalyzed resolution of stereogenic centers in steroid side chains by transesterification in organic solvents: the case of a 26-hydroxycholesterol
A. Soriente, M. De Rosa, P. Dovinola, G. Sodano and A. Scettri	2197	An easy approach to chiral non-racemic 6-(furan-3-yl)-5,6-dihydro-pyran-2-ones
T. Balasubramanian and A. Hassner	2201	Asymmetric synthesis of functionalized piperidine derivatives: synthesis of (*S*)-anatabine
S. Malfait, L. Pélinski and J. Brocard	2207	Highly chemo- and diastereoselective addition of diethylzinc through intramolecular autoactivation of enantiopure 2-acyl-1-formylferrocene: application to the synthesis of optically pure 1,2-diacylferrocenes
T. Abellán, C. Nájera and J. M. Sansano	2211	New chiral alanine template with a 1,2,3,6-tetrahydro-2-pyrazinone structure for the asymmetric synthesis of α-methyl α-amino acids
T. Sugahara and K. Ogasawara	2215	A new stereocontrolled route to (+)-curcuphenol, a phenolic sesquiterpene from the marine sponge *Didiscus flavus*
K. Kinbara, Y. Harada and K. Saigo	2219	(2-Naphthyl)glycolic acid: a tailored resolving agent for *p*-substituted 1-arylethylamines
R. Chinchilla, L. R. Falvello, N. Galindo and C. Nájera	2223	Asymmetric synthesis of substituted 1-aminocyclopropane-1-carboxylic acids from a new chiral glycine equivalent with 3,6-dihydro-2*H*-1,4-oxazin-2-one structure
S. Conde, M. Fierros, M. I. Rodríguez-Franco and C. Puig	2229	Resolution of 1-(4-amino-3-chloro-5-cyanophenyl)-2-bromo-1-ethanol by lipase mediated enantioselective alcoholysis, hydrolysis and acylation
A. Hercouet, N. Godbert and M. Le Corre	2233	Enantiospecific synthesis of norcoronamic acids

ARTICLES

E. V. Dehmlow, R. Klauck, S. Düttmann, B. Neumann and H.-G. Stammler	2235	Revisiting optically active quaternary derivatives made from prolinol as phase transfer catalysts
A. R. Katritzky, D. C. Aslan and D. C. Oniciu	2245	Stereoselective synthesis of 2-(α-hydroxyalkyl)benzimidazoles
G. Zhao, Q.-G. Wang and T. C. W. Mak	2253	Synthesis of optically-active planar chiral derivatives of ferrocene. Crystal structures of alkyne insertion products
G. Surpateanu, F. Agbossou, J.-F. Carpentier and A. Mortreux	2259	Rhodium dihydride complexes as models for the theoretical analysis of enantioselective hydrogenation reactions
L.-S. Li, Y. Wu, Y.-J. Hu, L.-J. Xia and Y.-L. Wu	2271	Asymmetric hetero-Diels–Alder reaction of 1-alkyl-3-silyloxy-1,3-dienes with ethyl glyoxylate catalyzed by a chiral (salen)cobalt(II) complex
P. Le Gendre, M. Offenbecher, C. Bruneau and P. H. Dixneuf	2279	New optically active amido-phosphinite ligand and ruthenium complexes
A. Imura, M. Itoh and A. Miyadera	2285	Enantioselective synthesis of 20(*S*)-camptothecin using an enzyme-catalyzed resolution
A. Bigi, A. Mordini, A. Thurner, F. Faigl, G. Poli and L. Tõke	2293	Kinetic resolution of racemic alkoxy oxiranes by chiral lithium amides
F.-R. Alexandre and F. Huet	2301	Asymmetrization of *meso*-1,3-diols utilising *Pseudomonas fluorescens* lipase
S. Sengupta, D. Sen Sarma and S. Mondal	2311	γ-Chiral β-ketosulfones in asymmetric synthesis: a unified synthetic strategy for enantiopure γ-amino and γ-hydroxy vinyl sulfones
M. Fogagnolo, P. P. Giovannini, A. Guerrini, A. Medici, P. Pedrini and N. Colombi	2317	Homochiral (*R*)- and (*S*)-1-heteroaryl- and 1-aryl-2-propanols via microbial redox
S. Hannour, M.-L. Roumestant, P. Viallefont, C. Riche, J. Martinez, A. El Hallaoui and F. Ouazzani	2329	Asymmetric synthesis of (2*S*,3*R*,4*R*)-ethoxycarbonylcyclopropyl phosphonoglycine
A. H. Fauq, C. Ziani-Cherif and E. Richelson	2333	Synthesis of (*S*)- and (*R*)-enantiomers of *p*-(4-hydroxybenzoyl)phenylalanine, useful photoaffinity labeling probes for peptide–protein binding sites
M. Péter, J. Van der Eycken, G. Bernáth and F. Fülöp	2339	Enzymatic resolution of alicyclic 1,3-amino alcohols in organic media
J. Christoffers and U. Rößler	2349	Novel synthesis of chiral, enantiomerically pure thiodiglycols and diglycols

K. Hammer and K. Undheim	2359	Hydroxymethylated cyclic α-amino acid dipeptides by ruthenium ring closing metathesis
S. Mahboobi, A. Popp, T. Burgemeister and D. Schollmeyer	2369	Diastereoselective synthesis of (–)-1-methyl-(3*S*,4*R*)-3,4-bis((2*S*)-*N*-(*tert*-butyloxycarbonyl)pyrrolidin-2-yl)-2-pyrrolidinone by an asymmetric Michael reaction
	A319	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 14

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 37
C. J. Richards and A. J. Locke	2377	Recent advances in the generation of non-racemic ferrocene derivatives and their application to asymmetric synthesis
		COMMUNICATIONS
E. Keller, J. Maurer, R. Naasz, T. Schader, A. Meetsma and B. L. Feringa	2409	Unexpected enhancement of enantioselectivity in copper(II) catalyzed conjugate addition of diethylzinc to cyclic enones with novel TADDOL phosphorus amidite ligands
G. Zhu and X. Zhang	2415	Additive effects in Ir–BICP catalyzed asymmetric hydrogenation of imines
M. Amat, J. Hidalgo, N. Llor and J. Bosch	2419	Enantioselective synthesis of the *trans*-2,6-dialkylpiperidine alkaloids (2*R*,6*R*)-lupetidine and (2*R*,6*R*)-solenopsin A
		ARTICLES
D. S. Matteson and J. Lu	2423	Asymmetric synthesis of 1-acyl-3,4-disubstituted pyrrolidine-2-boronic acid derivatives
J. L. García Ruano, A. Lorente and J. H. Rodríguez Ramos	2437	Synthesis of enantiomerically pure acyclic α-sulfinyl ketimines
Y.-M. Zhang, A. Brodzky and P. Sinaÿ	2451	Synthesis of mono-, di- and trisulfated Lewis x trisaccharides
K. Burgess and A. M. Porte	2465	Application of novel phosphine oxazoline ligands in asymmetric allylations of 4-acyloxy-2-pentene derivatives
R. Lenz, S. V. Ley, D. R. Owen and S. L. Warriner	2471	Stereoelectronic effects in the reactions of conformationally restricted, substituted cyclohexane-1,2-diones with 1,2-diols
L. Banfi, G. Guanti, A. Mugnoli and R. Riva	2481	Lipase catalyzed asymmetrization of quinolyl substituted 1,3-propanediols
J. M. Andrés and R. Pedrosa	2493	A facile stereodivergent synthesis of *threo*- and *erythro*-*N*,*N*-dibenzyl sphingosines from (*S*)-*N*,*N*-dibenzyl-*O*-TBDMS-serinal
T. Kanger, P. Niidas, A.-M. Müürisepp, T. Pehk and M. Lopp	2499	Synthesis of chiral epoxyalkynes
L. Prat, L. Mojovic, V. Levacher, G. Dupas, G. Quéguiner and J. Bourguignon	2509	Deracemization of diarylmethanes via lateral lithiation–protonation sequences by means of sparteine
J. Fuentes, J. L. Molina and M. A. Pradera	2517	Reactions of per-*O*-acetylglucosyl isothiocyanate with carbon bases. A new method for the stereocontrolled syntheses of nucleosides and glucosyl-aminothiophenes
R. K. Duke, R. D. Allan, M. Chebib, J. R. Greenwood and G. A. R. Johnston	2533	Resolution and conformational analysis of diastereoisomeric esters of *cis*- and *trans*-2-(aminomethyl)-1-carboxycyclopropanes

M. R. Wormald, R. J. Nash, P. Hrnciar, J. D. White, R. J. Molyneux and G. W. J. Fleet — 2549 Configurational and conformational analysis of highly oxygenated pyrrolizidines: definitive identification of some naturally occurring 7a-epi-alexines

A357 Stereochemistry abstracts

I Instructions to contributors

VII Cumulative author index

NUMBER 15

Contents

v Tetrahedron prize for creativity in organic chemistry 1998

vii Contributors to this issue

ix Graphical abstracts

COMMUNICATIONS

C. Bonini, L. Chiummiento, M. Funicello, L. Marconi and G. Righi — 2559 Chiral polypropionate subunit by a chemoenzymatic approach

A. Ariffin, A. J. Blake, R. A. Ewin and N. S. Simpkins — 2563 Use of a bis-lithium amide base in asymmetric metallation of tricarbonyl-(η^6-1,3-dihydroisobenzothiophene)chromium(0)

T. Nishi, K. Nakajima, Y. Iio, K. Ishibashi and T. Fukazawa — 2567 Practical methods for the preparation of spiro[benzo[*c*]thiophene-1(3*H*),4′-piperidine]-(2*S*)-oxide by resolution and asymmetric sulfoxidation

H. Nakamura, M. Takahashi and A. Murai — 2571 Synthesis and absolute configuration of an exomethylene portion of zooxanthellatoxin-A

G. Chelucci and A. Saba — 2575 New 1,10-phenanthroline ligands for asymmetric catalysis: enantioselective palladium catalyzed allylic substitution

ARTICLES

V. E. U. Costa, J. Alifantes and J. E. D. Martins — 2579 Evaluation of lipase from *Candida rugosa* in the resolution of *endo*-(±)-1,8,9,10,11,11-hexachloropentacyclo[6.2.1.$1^{3,6}$.$0^{2,7}$.$0^{5,9}$]dodecan-4-alcohol

P.-J. Colson, C. A. Przybyla, B. E. Wise, K. A. Babiak, L. M. Seaney and D. E. Korte — 2587 An efficient asymmetric synthesis of (3*S*)-3-amino-1-(4-cyanophenyl)-2-oxopyrrolidine hydrochloride salt

S. Malfait, L. Pélinski and J. Brocard — 2595 Enantioselective synthesis and use in catalytic asymmetric addition of diethylzinc to benzaldehyde of new chiral cyclic hydroxyamino ferrocene and chromium complexes: influence of the complexation on the enantioselectivity

M. Majewski and P. Nowak — 2611 Stereoselective synthesis of (+)-frontalin

A. Lattanzi, F. Bonadies, A. Schiavo and A. Scettri — 2619 Alternative approach to the synthesis of optically active β-keto sulfoxides by furylhydroperoxides enantioselective oxidations

S. Sankaranarayanan and S. Chattopadhyay — 2627 Enantiospecific synthesis of 6-methylheptadec-(9*E*)-enoic acid enantiomers, the antimicrobial principles of *Sporothrix* species

A. Sharma and S. Chattopadhyay — 2635 Chemoenzymatic synthesis of (*S*)-eicos-(4*E*)-en-1-yn-3-ol, the cytotoxic principle of the marine sponge, *Cribrochalina vasculum*

P. Kiełbasiński, P. Góralczyk, M. Mikołajczyk, M. W. Wieczorek and W. R. Majzner — 2641 Enzyme-promoted kinetic resolution of racemic, P-chiral phosphonyl and phosphorylacetates

C. R. Ramanathan and M. Periasamy — 2651 Resolution of C_2-symmetric 9,10-dihydro-9,10-ethanoanthracene-11,12-dicarboxylic acid and 2,3-diphenylsuccinic acid using (*S*)-proline

K. Satoh, M. Inenaga and K. Kanai — 2657 Synthesis of a key intermediate of levofloxacin via enantioselective hydrogenation catalyzed by iridium(I) complexes

T. Honda and T. Ogino — 2663 Enantiodivergent synthesis of the key intermediate for a marine natural furanoterpene by chemoenzymatic process

M. L. G. Ferreira, S. Pinheiro, C. C. Perrone, P. R. R. Costa and V. F. Ferreira 2671 New carbohydrate-based chiral auxiliaries in Diels–Alder reaction

J.-N. Cui, T. Ema, T. Sakai and M. Utaka 2681 Control of enantioselectivity in the baker's yeast asymmetric reduction of γ-chloro β-diketones to γ-chloro (*S*)-β-hydroxy ketones

V. S. Enev, J. Mohr, M. Harre and K. Nickisch 2693 The first Lewis acid mediated asymmetric Torgov cyclisation

J.-P. Mazaleyrat, A. Boutboul, Y. Lebars, A. Gaucher and M. Wakselman 2701 Practical resolution of an atropoisomeric α,α-disubstituted glycine with L-phenylalanine cyclohexylamide as chiral auxiliary

A. Chattopadhyay and B. Dhotare 2715 Facile approach towards the synthesis of homochiral functionalised alcohols from 4-*O*-[(*tert*)-butyldimethylsilyl]-2,3-*O*-cyclohexylidene-L-threose of (L)-(+)-tartaric acid origin

D. H. Dao, M. Okamura, T. Akasaka, Y. Kawai, K. Hida and A. Ohno 2725 Stereochemical control in microbial reduction. Part 31: Reduction of alkyl 2-oxo-4-arylbutyrates by baker's yeast under selected reaction conditions

J. T. Lundquist IV, E. E. Büllesbach and T. A. Dix 2739 Synthesis of protected ω-mercapto amino acids: precursors for incorporation of elongated cysteines into peptides

E. Ebbers, G. J. A. Ariaans, B. Zwanenburg and A. Bruggink 2745 Controlled design of resolutions. Prediction of the efficiency of resolutions based on samples of arbitrary composition

A377 Stereochemistry abstracts

I Instructions to contributors

VII Cumulative author index

NUMBER 16

Contents

vii Contributors to this issue

ix Graphical abstracts

2755 Corrigendum

COMMUNICATIONS

H. Pajouhesh and K. Curry 2757 An efficient and general enantioselective synthesis of some isoxazole-containing analogues of the neuroexcitant glutamic acid

A. González and G. Valencia 2761 Photochemical desulfurization of L-cysteine derivatives

V. Blandin, J.-F. Carpentier and A. Mortreux 2765 New one pot synthesis of a chiral α-hydroxy-γ-butyrolactone via sequential asymmetric hydrogenation of an α,γ-diketoester

R. Chinchilla, N. Galindo and C. Nájera 2769 Asymmetric synthesis of (*S*)-α-methyl α-amino acids by alkylation of chiral 3,6-dihydro-2*H*-1,4-oxazin-2-ones using unactivated alkyl halides and organic bases

R. Kuwano, S. Okuda and Y. Ito 2773 Asymmetric hydrogenation of (*E*)-α,β-bis(*N*-acylamino)acrylates catalyzed by a rhodium complex with *trans*-chelating chiral diphosphine ligand

A. H. Fray 2777 Intramolecular aminolysis of trichloroethyl esters: a mild macrocyclization protocol for the preparation of cryptophycin derivatives

A. Kornienko, D. I. Turner, C. H. Jaworek and M. d'Alarcao 2783 Practical synthesis of a differentially protected *myo*-inositol

A. Pecunioso, M. Maffeis and C. Marchioro 2787 Determination of the absolute configuration of an unexpectedly stable *N*-silylated isomer isolated en route to the trinem antibiotic GV129606

J. K. Lynch, M. W. Holladay, K. B. Ryther, H. Bai, C.-N. Hsiao, H. E. Morton, D. A. Dickman, W. Arnold and S. A. King 2791 Efficient asymmetric synthesis of ABT-594; a potent, orally effective analgesic

S. D. Bull, S. G. Davies, S. W. Epstein and J. V. A. Ouzman	2795	Deracemisation of α-amino acids — (*R*)- and (*S*)-phenylalanine from the same enantiomer of a homochiral auxiliary
		ARTICLES
C.-S. Chang, S.-W. Tsai and C.-N. Lin	2799	Enzymatic resolution of (*RS*)-2-arylpropionic acid thioesters by *Candida rugosa* lipase-catalyzed thiotransesterification or hydrolysis in organic solvents
C. Sanfilippo, A. Patti, M. Piattelli and G. Nicolosi	2809	Convenient access to both enantiomers of new azido- and aminoinositols via a chemoenzymatic route
G. Delogu, D. Fabbri and M. A. Dettori	2819	Preparation and resolution of 2,2′-dimercapto-6,6′-dimethoxy-1,1′-biphenyl: a C_2-symmetric sulfur building block
R. Chênevert and Y. S. Rose	2827	A chemoenzymatic synthesis of both enantiomers of a *cis*-lignan lactone
S. Schneider, M. G. Wubbolts, D. Sanglard and B. Witholt	2833	Production of chiral hydroxy long chain fatty acids by whole cell biocatalysis of pentadecanoic acid with an *E. coli* recombinant containing cytochrome $P450_{BM-3}$ monooxygenase
M. Calmes and F. Escale	2845	New synthesis of enantiomerically pure (*S*)-3-amino-2-phenyl propanoic acid via the asymmetric transformation of its racemic *N*-phthaloyl derivative
K. Lundhaug, P. L. A. Overbeeke, J. A. Jongejan and T. Anthonsen	2851	Organic co-solvents restore the inherently high enantiomeric ratio of lipase B from *Candida antarctica* in hydrolytic resolution by relieving the enantiospecific inhibition of product alcohol
A. Barco, S. Benetti, C. De Risi, P. Marchetti, G. P. Pollini and V. Zanirato	2857	Enantioselective formal synthesis of (–)-ovalicin using quinic acid as a chiral template
H. Nishiyama, N. Soeda, T. Naito and Y. Motoyama	2865	Single-chiral bis(oxazolinyl)pyridine (pybox). Efficiency in asymmetric catalytic cyclopropanation
S. Arseniyadis, J. Quilez del Moral, R. Brondi Alves, P. Potier and L. Toupet	2871	A convenient preparation of taxoid right-half building blocks
H.-J. Zhu, B.-T. Zhao, W.-M. Dai, J. Zhou and X.-J. Hao	2879	Chiral ligands derived from abrine. Part 5: Substituent effects on asymmetric induction in enantioselective addition of diethylzinc to benzaldehyde catalyzed by chiral oxazolidines possessing an indole moiety
K. Iseki, Y. Kuroki and Y. Kobayashi	2889	Asymmetric allenylation of aliphatic aldehydes catalyzed by a chiral formamide
F. Elekes, Z. Kovári, A. Mravik, Z. Böcskei and E. Fogassy	2895	New access to enantiopure *O,O′*-dibenzoyltartaric acid: resolution of the mixed calcium methoxyacetate by preferential crystallization
W. Kroutil and K. Faber	2901	Deracemization of compounds possessing a *sec*-alcohol or -amino group through a cyclic oxidation–reduction sequence: a kinetic treatment
P. Allevi, P. Ciuffreda, A. Longo and M. Anastasia	2915	Lipase-catalysed chemoselective monoacetylation of hydroxyalkylphenols and chemoselective removal of a single acetyl group from their diacetates
A. A. Smith	2925	Calculation of the efficiency of purification by crystallization of ideal multicomponent stereoisomeric mixtures
S. Caccamese and G. Principato	2939	Resolution of the enantiomers of tetrahydrozoline by chiral HPLC. The racemization of the enantiomers via an imine–enamine tautomerism
B. G. Davis, A. Hull, C. Smith, R. J. Nash, A. A. Watson, D. A. Winkler, R. C. Griffiths and G. W. J. Fleet	2947	5-*epi*-Deoxyrhamnojirimycin is a potent inhibitor of an α-L-rhamnosidase: 5-*epi*-deoxymannojirimycin is not a potent inhibitor of an α-D-mannosidase
	A413	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 17

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

P.-H. Leung, H. Lang, A. J. P. White and D. J. Williams 2961 Molecular recognition in the palladium complex promoted asymmetric synthesis of a keto-ester heterofunctionalized P-chiral phosphine

M. C. Carreño, S. García-Cerrada, A. Urbano and C. Di Vitta 2965 Enantioselective Diels–Alder reactions of chiral racemic acyclic dienes with (*SS*)-2-(*p*-tolylsulfinyl)-1,4-naphthoquinone

K. Everaere, J.-F. Carpentier, A. Mortreux and M. Bulliard 2971 Ruthenium catalyzed asymmetric transfer hydrogenation of β-ketoesters

C. G. Francisco, E. I. León, P. Moreno and E. Suárez 2975 Synthesis and radical fragmentation of carbohydrate anomeric nitrates. Formation of convenient chiral synthetic intermediates

B. F. Bonini, M. Comes-Franchini, M. Fochi, G. Mazzanti, A. Ricci and G. Varchi 2979 New chiral allylaminosilanes and their use in asymmetric Sakurai reactions

M. Widhalm, K. Mereiter and M. Bourghida 2983 A new aminophosphine ligand containing axial and planar chiral elements

ARTICLES

A. Carloni, G. Porzi and S. Sandri 2987 Stereoselective synthesis of uncommon α,α′-dialkyl-α-aminoacids. Part 1

E. Bertounesque, F. Millal, P. Meresse and C. Monneret 2999 Synthesis of a highly functionalized γ-lactone as a precursor of 9-pentyl anthracyclines

M. J. Milewska, M. Gdaniec, H. Małuszyńska and T. Połoński 3011 Chiroptical spectra and molecular geometry of bicyclic dithioimides

E. Caballero, C. Avendaño and J. C. Menéndez 3025 On the fate of the tryptophan stereocenter during the synthesis of hexacyclic analogues of *N*-acetylardeemin

M. Falorni, G. Giacomelli and A. M. Spanedda 3039 Synthesis of chiral pyrazoles and isoxazoles as constrained amino acids

A. Imura, M. Itoh and A. Miyadera 3047 Resolution of *cis*-2-fluorocyclopropanecarboxylic acid by a microbial enantioselective hydrolysis

M. Laspéras, N. Bellocq, D. Brunel and P. Moreau 3053 Chiral mesoporous templated silicas as heterogeneous inorganic–organic catalysts in the enantioselective alkylation of benzaldehyde

R. Alvarez and A. R. de Lera 3065 Synthesis of haminol-A and haminol-B, polyenic alarm pheromones of cephalaspidean molluscs

A. Patti, D. Lambusta, M. Piattelli and G. Nicolosi 3073 Lipase-mediated resolution of 2-hydroxymethyl-1-iodoferrocene: synthesis of ferrocenes and biferrocenes with planar chirality

G. Solladié, F. Colobert and D. Denni 3081 Enantioselective synthesis of C_2-symmetric hexols from β,δ-diketosulfoxides

C. Vergne, J.-P. Bouillon, J. Chastanet, M. Bois-Choussy and J. Zhu 3095 Asymmetric synthesis of 3,5-bis(isopropyloxy)-4-methoxyphenyl glycine by way of a diastereoselective Strecker reaction and an Evans electrophilic amination reaction

C. Andreu, J.-P. Villarroya, A. García-Gastaldi, M. Medio-Simón, J. Server-Carrió and T. Varea 3105 Enzymatic esterification of bicyclic *meso*-diols derived from 1,4-bis(hydroxymethyl)furan. An enantioselective Diels–Alder reaction equivalent

A. Madrigal, M. Grande and C. Avendaño 3115 Stereochemical issues related to the synthesis of 7,10-dimethyl-7,10,16,16a-tetrahydro-11*H*-quinazolino[2′,3′:3,4]pyrazino[1,2-*b*]β-carboline-5,8-diones

N. Kise, T. Urai and J. Yoshida 3125 Formation and reaction of 2-metalated *N*-Boc-4,4-dimethyl-1,3-oxazolidines in the presence of (–)-sparteine: new chiral formyl anion equivalents

A. Jégou and A. Veyrières 3129 Nucleophilic addition of 2-(trimethylsilyloxy)furan to a D-glucopyranose oxocarbenium ion

S. Cserépi-Szűcs, I. Tóth, L. Párkányi and J. Bakos 3135 Asymmetric hydroformylation of styrene using rhodium and platinum complexes of diphosphites containing chiral chelate backbones and chiral 1,3,2-dioxaphosphorinane moieties

A437 Stereochemistry abstracts

I Instructions to contributors

VII Cumulative author index

NUMBER 18

Contents

v Contributors to this issue

vii Graphical abstracts

3143 Corrigendum

TETRAHEDRON: ASYMMETRY REPORT NUMBER 38

G. A. Sulikowski, K. L. Cha and M. M. Sulikowski 3145 Stereoselective intramolecular carbon–hydrogen insertion reactions of metal carbenes

COMMUNICATIONS

W. Iwanek 3171 Chiral calixarenes derived from resorcinol. Part 3: Functionalization of octaester derivatives with chiral amines and amino alcohols

T. Mori, K. Kosaka, Y. Nakagawa, Y. Nagaoka and K. Tomioka 3175 Enantioselective conjugate addition of diethylzinc to cyclohexenone catalyzed by a chiral aminophosphine–copper(II) triflate

J.-I. K. Almstead, T. P. Demuth Jr. and B. Ledoussal 3179 An investigation into the total synthesis of clerocidin: stereoselective synthesis of a clerodane intermediate

ARTICLES

Y. Jiang, S. Xue, Z. Li, J. Deng, A. Mi and A. S. C. Chan 3185 Asymmetric synthesis. Part 29: Asymmetric hydroformylation of styrene catalyzed by chiral spiro diphosphite–rhodium(I) complexes

M. D. Fryzuk, L. Jafarpour and S. J. Rettig 3191 Mixed donor ligands based on sp^2-hybridized nitrogen donors: asymmetric hydrosilylation catalyzed by rhodium complexes that contain the 2-(2-oxazolin-2-ylmethyl)pyridine system

H. Kotsuki, H. Hayakawa, H. Tateishi, M. Wakao and M. Shiro 3203 Synthesis of novel chiral oligopyridine derivative ligands for the enantioselective addition of diethylzinc to benzaldehyde

F. Cohen and L. E. Overman 3213 Planar-chiral cyclopalladated ferrocenyl amines and imines as enantioselective catalysts for allylic imidate rearrangements

H. Brunner, B. Nuber and M. Prommesberger 3223 Optically active transition metal complexes. Part 117: Synthesis, crystal structure and properties of chiral (η^6-arene)ruthenium complexes with *N,O*- and *O,N*-ligands

H. Brunner and M. Prommesberger 3231 Asymmetric catalysis: Part 127: Enantioselective desymmetrization of 2-*n*-butyl-4,7-dihydro-1,3-dioxepin with (η^6-arene)ruthenium(II) half-sandwich complexes

W. Hu, C. C. Pai, C. C. Chen, G. Xue and A. S. C. Chan 3241 Synthesis of a chiral pyridylphosphine ligand and a comparison of its rhodium complex with the structurally similar arylphosphine rhodium catalysts in the asymmetric hydrogenation of 2-(6′-methoxy-2′-naphthyl)propenoic acid

C. A. Maryanoff, L. Scott, R. D. Shah and F. J. Villani Jr. 3247 A crystallization-induced asymmetric transformation to prepare (*R*)-4-chlorophenylalanine methyl ester

T. Nishi, K. Ishibashi, K. Nakajima, Y. Iio and T. Fukazawa 3251 An efficient synthesis of enantiomerically pure 2-[(2*R*)-arylmorpholin-2-yl]ethanols, key intermediates of tachykinin receptor antagonist

C. Bit, A. A. Mitrochkine, G. Gil, M. Pierrot and M. Réglier 3263 Synthesis of enantiomerically pure *cis*- and *trans*-1,2-diaminoindanes

K. Tanaka and M. Yasuda 3275 A practical synthesis of (*R*)-3-chlorostyrene oxide starting from 3-chloroethylbenzene

P. Kiełbasiński, J. Omelańczuk and M. Mikołajczyk 3283 Lipase-promoted kinetic resolution of racemic, P-chiral hydroxymethylphosphonates and phosphinates

H. Takahata, M. Kubota, K. Ihara, N. Okamoto, T. Momose, N. Azer, A. T. Eldefrawi and M. E. Eldefrawi	3289	New synthesis of all the four stereoisomers of indolizidine 209D and their affinity for nicotinic acetylcholine receptor
J. Zhang, S. Takahashi, S. Saito and T. Koizumi	3303	First synthesis and stereochemistry of enantiomerically pure spiroselenurane and spirotellurane using the 2-*exo*-hydroxy-10-bornyl group as a chiral ligand
K. J. Kise Jr. and B. E. Bowler	3319	Enantioselective synthesis of an unnatural bipyridyl amino acid and its incorporation into a peptide
N. Yoshida, T. Kamikubo and K. Ogasawara	3325	Lipase-mediated kinetic resolution of a synthetic equivalent of 2-hydroxymethylcyclopentadien-5-ol
	A471	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 19

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 39
M. A. Yurovskaya and A. V. Karchava	3331	Stereoselective reduction of endocyclic carbon–nitrogen double bond: application to the synthesis of biomolecules
		COMMUNICATIONS
M. Frank and H.-J. Gais	3353	Asymmetric synthesis of allylic sulfides via palladium-mediated allylation of thiols
A. Agócs, A. Bényei, L. Somogyi and P. Herczegh	3359	Cycloaddition reactions of carbohydrate derivatives. Part 7: [3+2] Cycloadditions of chiral nitrilimines
		ARTICLES
K. Manju and S. Trehan	3365	Asymmetric reduction of aromatic ketones: importance of the conformation of the aromatic group
W. Zhang, Y. Yoneda, T. Kida, Y. Nakatsuji and I. Ikeda	3371	Novel chiral P,N-ferrocene ligands in palladium-catalyzed asymmetric allylic alkylations
J. M. Padrón, G. Kokotos, T. Martín, T. Markidis, W. A. Gibbons and V. S. Martín	3381	Enantiospecific synthesis of α-amino acid semialdehydes: a key step for the synthesis of unnatural unsaturated and saturated α-amino acids
S. Koul, S. C. Taneja, R. Parshad and G. N. Qazi	3395	Enantioselective hydrolysis of alkyl esters of substituted 1-phenyl ethanols using newly isolated strain of *Arthrobacter* sp.; a comparative study with known commercial lipases
G. Barbaro, A. Battaglia, A. Guerrini, C. Bertucci and S. Geremia	3401	Assessment of the absolute configuration of a series of (3*R*)-3-hydroxy-3-alkyl-β-lactams
G. Porzi and S. Sandri	3411	A new stereoselective synthesis of sterically constrained uncommon α,α′-dialkylated α-amino acids. Part 2
S. Naili, A. Mortreux and F. Agbossou	3421	New chiral aminophosphine carboxyphosphinite ligands (AMPCP). Synthesis and application in asymmetric hydrogenation and hydroformylation
J. Wu, X.-L. Hou, L.-X. Dai, L.-J. Xia and M.-H. Tang	3431	Enantioselective ring opening of *meso*-epoxides with thiols catalyzed by a chiral (salen)Ti(IV) complex
U. Bremberg, F. Rahm and C. Moberg	3437	Palladium-catalyzed allylic alkylation using pyridino-oxazolines and quinolino-oxazolines as ligands—influence of steric factors
J. L. García Ruano, D. Barros, M. C. Maestro, A. Alcudia and I. Fernández	3445	Synthesis of enantiomerically pure (*R*)- and (*S*)-2-ethoxycarbonylmethyl-2-hydroxy-cyclohexanones
J.-P. Picard and F. Fortis	3455	First enantioselective synthesis of a 1-(trimethylsilyl)alkylamine

J. C. Anderson, R. Cubbon, M. Harding and D. S. James	3461	Concepts for ligand design in asymmetric catalysis: a study of chiral amino thiol ligands
A. Ritzén, B. Basu, A. Wållberg and T. Frejd	3491	Phenyltrisalanine: a new, C_3-symmetric, trifunctional amino acid
M. Tichý, J. Holanová and J. Závada	3497	ω-Amino acids and lactams with chiral biaryl axis
J. P. Shilvock, R. J. Nash, J. D. Lloyd, A. L. Winters, N. Asano and G. W. J. Fleet	3505	Intermediates for incorporation of tetrahydroxypipecolic acid analogues of α- and β-D-mannopyranose into combinatorial libraries: unexpected nanomolar-range hexosaminidase inhibitors. Synthesis of α- and β-homomannojirimycin
	A493	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 20

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 40
C. Cativiela and M. D. Díaz-de-Villegas	3517	Stereoselective synthesis of quaternary α-amino acids. Part 1: Acyclic compounds
		COMMUNICATIONS
K. S. Kim and Y. H. Ahn	3601	Synthesis of the diazepanone-nucleoside portion of liposidomycins by aldol reaction of the enolate of diazepanone with a nucleoside 5′-aldehyde
Y.-Y. Yan and M. Widhalm	3607	Synthesis and application of macrocyclic binaphthyl ligands with extended chiral bias
S. Sano, M. Takebayashi, T. Miwa, T. Ishii and Y. Nagao	3611	Diastereoselective alkylation of a newly designed bislactim ether towards the asymmetric synthesis of α-alkylated serines
S. Sano, T. Miwa, X.-K. Liu, T. Ishii, T. Takehisa, M. Shiro and Y. Nagao	3615	Tin- or magnesium-mediated diastereoselective aldol-type reactions for the asymmetric synthesis of α-substituted serines
J. D. Moseley and J. Staunton	3619	Influence of ester chain length on lipase catalysed hydrolyses of *meso*-oxiranedimethanol esters
C. Santi, G. Fragale and T. Wirth	3625	Synthesis of a new chiral nitrogen containing diselenide as a precursor for selenium electrophiles
		ARTICLES
M. Kuttenberger, M. Frieser, M. Hofweber and A. Mannschreck	3629	Axially chiral thioamides of acrylic acid: correlated and uncorrelated internal rotations
J.-C. Fiaud, F. Mazé and H. B. Kagan	3647	Chiral hydroxythiols as catalysts for enantioselective borane ketone reductions
M. Rejzek, Z. Wimmer, M. Zarevúcka, J. Kuldová, D. Šaman and M. Vacek	3657	Optically active juvenoids derived from 2-substituted cyclopentanol and their biological activity on *Tenebrio molitor*
C. Cardellicchio, G. Ciccarella, F. Naso, E. Schingaro and F. Scordari	3667	The Betti base: absolute configuration and routes to a family of related chiral nonracemic bases
C. de Bellefon and N. Tanchoux	3677	Effect of non-linear kinetics on the enantioselectivity in the H-transfer asymmetric homogeneous reduction of arylketones with a rhodium diamine catalyst
A. K. Ghosh, H. Cho and J. Cappiello	3687	Bis(oxazoline) derived cationic aqua complexes: highly effective catalysts for enantioselective Diels–Alder reactions
Y. Meng, W. T. Slaven IV, D. Wang, T.-J. Liu, H.-F. Chow and C.-J. Li	3693	Stepwise synthesis and characterization of oligomers based on 1,1′-binaphthol with 3,3′-acetylene spacer

D. Enders, C. Poiesz and R. Joseph	3709	Enantioselective synthesis of protected α-aminoketones via electrophilic amination of α-silylketones with an oxaziridine
O. Schrake, W. Braje, H. M. R. Hoffmann and R. Wartchow	3717	Synthesis of 10,11-didehydro- and 10,11-dihydro-Quincorine and of the Quincoridine analogs: functionalized and enantiopure 1-azabicyclo[2.2.2]-octanes with four stereogenic centers
C. J. Martin, D. J. Rawson and J. M. J. Williams	3723	The preparation of enantiomerically enriched γ-amino acids (GABAs) using palladium catalysed allylic substitution
	A521	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 21

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
P. Bravo, E. Corradi, C. Pesenti, B. Vergani, F. Viani, A. Volonterio and M. Zanda	3731	Stereocontrolled approaches to (+)- and (–)-γ-trifluoromethyl-GABOB, a new hydroxymethylene (statine) dipeptide isostere
C. André, J. Bolte and C. Demuynck	3737	Syntheses of 4-deoxy-D-fructose and enzymatic affinity study
J. Lopez, E. A. Mintz, F.-L. Hsu and X. R. Bu	3741	Novel unsymmetric chiral Schiff bases possessing two different donor moieties: unique tetradentate ligands from combination of salicylaldehyde and acetylacetone units
W. C. Frank	3745	Surprising stereoselectivity in the Payne epoxidation of terpinen-4-ol with acetonitrile/hydrogen peroxide
S. Y. Cho and M. Shibasaki	3751	The asymmetric synthesis of cyclopentane derivatives by palladium-catalyzed coupling of prochiral alkylboron compounds
		ARTICLES
Z. Liu, J. Lan and Y. Li	3755	Facile one-pot transformation of 2,3-epoxy alcohols into allylic alcohols: first total synthesis of (–)-4-*O*-(6′-hydroxy-7′(9′)-dehydro-6′,7′-dihydrogeranyl)-coniferol
H. Brunner, B. Nuber and T. Tracht	3763	Optically active transition metal complexes. Part 119: New rhodium(I) complexes containing two different types of optically active ligands
H. Brunner and T. Tracht	3773	Asymmetric catalysis. Part 128: Diastereomeric rhodium(I) complexes in the enantioselective hydrogenation of ketopantolactone
B. Dasgupta and W. A. Donaldson	3781	Synthetic studies directed toward streptenol D: enantioselective preparation of the 3,5-diacetoxy-6*E*,8*E*-decadiene segment
P. Z. Wang, Y. Q. Tu, L. Yang, C. Z. Dong and W. Kitching	3789	Synthetic studies of didemnaketal analogue—construction of the (+)- and (–)-5,6-dihydroxy-3,7-dimethyl-octanal intermediates
K. Hiroi, Y. Suzuki, I. Abe, Y. Hasegawa and K. Suzuki	3797	Chiral sulfoxide ligands bearing nitrogen atoms as stereocontrollable coordinating elements in palladium-catalyzed asymmetric allylic alkylations
T. Koga, Y. Aoki, T. Hirose and H. Nohira	3819	Resolution of sclareolide as a key intermediate for the synthesis of Ambrox®
N. Hayashi, K. Yanagihara and S. Tsuboi	3825	Lipase-catalyzed kinetic resolution of Baylis–Hillman products
J. P. Cahill, F. M. Bohnen, R. Goddard, C. Krüger and P. J. Guiry	3831	The preparation of *trans*-2,5-dialkylpyrrolidinylbenzyldiphenylphosphines: new phosphinamine ligands for asymmetric catalysis
S. V. Andurkar, J. P. Stables and H. Kohn	3841	Synthesis and anticonvulsant activities of (*R*)-(*O*)-methylserine derivatives

V. Helaine and J. Bolte	3855	Chemo-enzymatic synthesis of the four stereoisomers of 4-hydroxy-4-methyl-glutamic acid
A. K. Kar and D. A. Lightner	3863	Circular dichroism of distorted helices. C(10)-Adamantyl and C(10)-*tert*-butyl biliverdins
E. Juaristi, M. Balderas and Y. Ramírez-Quirós	3881	Enantioselective synthesis of β-amino acids. Part 9: Preparation of enantiopure α,α-disubstituted β-amino acids from 1-benzoyl-2(*S*)-*tert*-butyl-3-methylperhydropyrimidin-4-one
M. Chavarot, J. J. Byrne, P. Y. Chavant, J. Pardillos-Guindet and Y. Vallée	3889	Self-organization of ligands in multi-component titanium catalysts for the enantioselective ene reaction of glyoxylates
J. K. Karjalainen, O. E. O. Hormi and D. C. Sherrington	3895	An improved heterogeneous asymmetric epoxidation of homoallylic alcohols using polymer-supported Ti(IV) catalysts
G. Pioda and A. Togni	3903	Highly enantioselective palladium-catalyzed hydrosilylation of norbornene with trichlorosilane using ferrocenyl ligands
P. Collomb and A. von Zelewsky	3911	Synthesis of new chiral catalysts, pyridyl- and bipyridylalcohols, for the enantioselective addition of diethylzinc to benzaldehyde
	A535	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 22

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
M. Adamczyk and R. E. Reddy	3919	A stereoselective synthesis of bis-β-amino acids
G. Guanti, S. Perrozzi and R. Riva	3923	Remote control by protecting groups in the diastereoselective addition of acetylides to 2-(4-quinolyl)propanol
H. Ohno, A. Toda, N. Fujii and T. Ibuka	3929	A convenient synthesis of activated enantiomerically pure 2-ethynylaziridines
G. Guillena and C. Nájera	3935	PTC and organic bases–LiCl assisted alkylation of imidazolidinone–glycine iminic derivatives for the asymmetric synthesis of α-amino acids
T. Soler, A. Bachki, L. R. Falvello, F. Foubelo and M. Yus	3939	Branched-chain functionalised carbohydrates via β-functionalised organo-lithium compounds
P. Merino, S. Franco, F. L. Merchan and T. Tejero	3945	Synthesis of isoxazolidin-5-ones via stereocontrolled Michael additions of benzylhydroxylamine to L-serine derived α,β-unsaturated esters
C. Barloy-Da Silva and P. Pale	3951	A chiron approach to the cyclopropyl lactone oxylipins
C. Agami, F. Amiot, F. Couty, L. Dechoux, C. Kaminsky and O. Venier	3955	Chiral oxazolidinones from α-hydroxy oxazolidines: a new access to 1,2-amino alcohols
D. Enders, L. Kramps and J. Zhu	3959	Zinc-mediated asymmetric epoxidation of nitro alkenes with oxygen
D. Delorme, C. Berthelette, R. Lavoie and E. Roberts	3963	Asymmetric synthesis of diarylmethylamines: preparation of selective opioid delta receptor ligands
R. M. Savizky, N. Suzuki and J. L. Bové	3967	The use of sonochemistry in the asymmetric epoxidation of substituted chalcones with sodium perborate tetrahydrate
		ARTICLES
Q. Wang, F. Yang, H. Du, M. M. Hossain, D. Bennett and D. S. Grubisha	3971	The synthesis of *S*-(+)-2,2-dimethylcyclopropane carboxylic acid: a precursor for cilastatin

C.-D. Hwang and B.-J. Uang	3979	Enantioselective addition of diethylzinc to aldehydes induced by a new chiral Ti(IV) catalyst
Z. Shan, Y. Xiong, W. Li and D. Zhao	3985	A simple, convenient preparation for enantiomerically pure 1,1′-bi-2-naphthols
A. Cruz, E. Geníz and R. Contreras	3991	1,3-Heterazolidin-2-ones as starting materials for optically active 1,3,2-oxazaborolines and 1,3,2-diazaboroline derived from ephedrines
J. M. Fraile, J. I. García, J. A. Mayoral and T. Tarnai	3997	Clay-supported bis(oxazoline)–copper complexes as heterogeneous catalysts of enantioselective cyclopropanation reactions
M. Knollmüller, M. Ferencic, P. Gärtner, K. Mereiter and C. R. Noe	4009	New camphor derived chiral ligands for asymmetric synthesis
P. D'Arrigo, M. Lattanzio, G. Pedrocchi Fantoni and S. Servi	4021	Chemo-enzymatic synthesis of the active enantiomer of the anorressant 2-benzylmorpholine
P. Bisel, G. Lauktien, E. Weckert and A. W. Frahm	4027	Diastereoselective α-iminoamine rearrangement: asymmetric synthesis of (*R*)-(–)- and (*S*)-(+)-2-benzyl-2-hydroxycyclohexanone
Y.-J. Wu, L. Ding, W.-L. Wang and C.-X. Du	4035	Resolution of cycloplatinated ferrocenylketimines
E. A. Broger, W. Burkart, M. Hennig, M. Scalone and R. Schmid	4043	New amidophosphine-phosphinites (tLANOPs) as chiral ligands for asymmetric hydrogenation reactions
S. Arseniyadis, M. del Rosario Rico Ferreira, J. Quílez del Moral, J. I. Martín Hernando, P. Potier and L. Toupet	4055	Studies towards the total synthesis of taxoids: a rapid entry into bicyclo[6.4.0]dodecane ring system. Part 1
G. Asensio, P. Alemán, A. Cuenca, J. Gil and M. Medio-Simón	4073	Efficient asymmetric protonation of enolates with readily accessible chiral α-sulfinyl alcohols
C. Chiappe, P. Crotti, E. Menichetti and M. Pineschi	4079	An efficient stereoselective synthesis of enantiomerically pure aziridine derivatives of allyl β-D-glucopyranosides asymmetrically induced by a glucide moiety
D. Hesek, Y. Inoue, S. R. L. Everitt, M. Kunieda, H. Ishida and M. G. B. Drew	4089	High yield preparation of a novel tetrakis[ruthenium tris(bipyridine)]calix[6]-arene derivative with good diastereomeric purity
	A561	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 23

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
M. Dickman, R. C. Lloyd and J. B. Jones	4099	Chemically modified mutants of subtilisin *Bacillus lentus* catalyze transesterification reactions better than wild type
H. Huang and Q. Chen	4103	Synthesis of enantiomerically pure spiro-cyclopropane derivatives containing multichiral centers
N. W. Fadnavis, R. L. Babu, S. K. Vadivel, A. A. Deshpande and U. T. Bhalerao	4109	Lipase catalyzed regio- and stereospecific hydrolysis: chemoenzymatic synthesis of both (*R*)- and (*S*)-enantiomers of α-lipoic acid
G. Huang and R. I. Hollingsworth	4113	An efficient synthesis of (*R*)-3-hydroxytetradecanoic acid
W. Adam, C. R. Saha-Möller and C.-G. Zhao	4117	Enantioselective oxidation of *vic*-diols to optically active α-hydroxy ketones by a fructose-derived dioxirane

M. Kossenjans, H. Pennemann, J. Martens, O. Juanes, J. C. Rodríguez-Ubis and E. Brunet	4123	New *N,O*-heterocycles derived from (*R*)-cysteine as catalysts in the enantioselective diethylzinc addition
		ARTICLES
A. H. Fauq, F. Hong, B. Cusack, B. M. Tyler, Y. Ping-Pang and E. Richelson	4127	Synthesis of (2*S*)-2-amino-3-(1*H*-4-indolyl)propanoic acid, a novel tryptophan analog for structural modification of bioactive peptides
J. Balsells, L. Mejorado, M. Phillips, F. Ortega, G. Aguirre, R. Somanathan and P. J. Walsh	4135	Synthesis of chiral sulfonamide/Schiff base ligands
X.-Y. Wu, X.-H. Li and Q.-L. Zhou	4143	Chiral quinolinyl-oxazolines as ligands for copper(I)-catalyzed asymmetric cyclopropanation
E. Tálas, J. Margitfalvi, D. Machytka and M. Czugler	4151	Synthesis and resolution of naphthyl-Tröger's base
J. P. Shilvock, K. Y. Hsia, R. J. Nash, J. D. Lloyd, A. L. Winters, N. Asano and G. W. J. Fleet	4157	Synthesis of an eight carbon homologue of α-homomannojirimycin via a bicyclic aminolactone
M. Asami, H. Watanabe, K. Honda and S. Inoue	4165	Enantioselective addition of dialkylzinc to aldehydes catalyzed by (*S*)-2-(*N,N*-disubstituted aminomethyl)indoline
A. Gong, Y. Chen, X. Zhang, C. Chen and F. Xi	4175	Optically active cyclic poly(ether sulfone)s based on chiral 1,1′-bi-2-naphthol
W. Hu, C.-C. Chen, G. Xue and A. S. C. Chan	4183	Synthesis of (–)-(4*R*,5*R*)-4,5-bis[di-3′-(2′,6′-dimethoxypyridyl)phosphinomethyl]-2,2-dimethyl-1,3-dioxolane and its application in the Rh-catalyzed asymmetric hydrogenation reactions
I. Grassert, U. Schmidt, S. Ziegler, C. Fischer and G. Oehme	4193	Use of rhodium complexes with amphiphilic and nonamphiphilic ligands for the preparation of chiral α-aminophosphonic acid esters by hydrogenation in micellar media
T. Murata, Y. Yanagisawa, M. Aoyama, H. Tsushima, K. Totani, S. Ohba and K. Tadano	4203	A chiral cyclohex-2-enone carrying a hexofuranosyl substituent which directs highly stereoselective 1,4-conjugate additions
M. Benito, C. López, X. Solans and M. Font-Bardía	4219	Palladium(II) compounds with planar chirality. X-Ray crystal structures of (+)-(*R*)-[{(η^5-C_5H_4)–CH=N–CH(Me)–$C_{10}H_7$}Fe(η^5-C_5H_5)] and (+)-(R_p,*R*)-[Pd{[(Et–C=C–Et)$_2$(η^5-C_5H_3)–CH=N–CH(Me)–$C_{10}H_7$]Fe(η^5-C_5H_5)}Cl]
R. Salter, T. E. Pickett and C. J. Richards	4239	2-Nitroferrocenyloxazolines: precursors to nitrofulvalenes and derivatives of ($_p$*S*)- and ($_p$*R*)-2-aminoferrocenecarboxylic acids
Y. N. Belokon', V. I. Tararov, V. I. Maleev, T. F. Savel'eva and M. G. Ryzhov	4249	Improved procedures for the synthesis of (*S*)-2-[*N*-(*N*′-benzylprolyl)-amino]benzophenone (BPB) and Ni(II) complexes of Schiff's bases derived from BPB and amino acids
C. Garcia, Y. Pointud, G. Jeminet, D. Dugat, J. L. Beltran	4253	Chiral macrocyclic polyethers incorporating a tetraoxaspiro[5.5]undecane or trioxa-azaspiro[5.5]undecane moiety
G. Nadler, C. Dartois, D. S. Eggleston, R. C. Haltiwanger and M. Martin	4267	Chromatographic resolution of antihypertensive benzopyrans by closed-loop recycling enantioselective high pressure preparative chromatography and their X-ray analysis
F. L. Buenadicha, C. Avendaño and M. Söllhuber	4275	Asymmetrically induced alkylation of 2-benzyl-4-isopropyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione
	A587	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 24

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

R. Chênevert, D. Goupil, Y. S. Rose and E. Bédard	4285	Enzymatic desymmetrization of *meso cis,cis*-2,4,6-substituted tetrahydropyrans
W. Iwanek	4289	Chiral calixarene derived from resorcinol. Part 4: Diastereoselective closure of the oxazine ring
M. Martín-Vilà, C. Minguillón and R. M. Ortuño	4291	Stereoselective synthesis of (–)-(1*R*,2*S*)-2-aminocyclobutane-1-carboxylic acid, a conformationally constrained β-amino acid
S. Katayama, N. Ae and R. Nagata	4295	Enzymatic resolution of 2-substituted tetrahydroquinolines. Convenient approaches to tricyclic quinoxalinediones as potent NMDA-glycine antagonists
J. P. Cahill and P. J. Guiry	4301	The application of Pd-complexes of *trans*-2,5-dialkylpyrrolidinylbenzyldiphenylphosphines to enantioselective allylic alkylation

ARTICLES

J. P. Cahill, A. P. Lightfoot, R. Goddard, J. Rust and P. J. Guiry	4307	The application of Ir-complexes of *trans*-2,5-dialkylpyrrolidinylbenzyldiphenylphosphines to the enantioselective reduction of imines
J. M. Takacs, M. R. Jaber, B. J. Swanson and S. J. Mehrman	4313	Regio- and diastereoselective boron-mediated aldol reactions of chiral α,β,γ,δ-unsaturated *N*-acyloxazolidinones
R. Chênevert, B. T. Ngatcha, Y. S. Rose and D. Goupil	4325	Regio- and enantioselectivity of the enzyme-catalyzed hydrolysis of citric acid derivatives
H. Akita, K. Kurashima, M. Nozawa, S. Yamamura, K. Seri and Y. Imamura	4331	Determination of absolute configuration of a metabolite (–)-hydroxyhexamide from acetohexamide, syntheses of (–)- and (+)-hydroxyhexamides and (–)- and (+)-acetoxyhexamides
M. Schulz, R. Kluge and F. Gadissa Gelalcha	4341	Asymmetric peroxidation of prochiral allylic and benzylic compounds with *tert*-butyl hydroperoxide and chiral bisoxazoline–copper complexes
P. Chalard, R. Remuson, Y. Gelas-Mialhe and J.-C. Gramain	4361	Asymmetric synthesis of quinolizidine alkaloids (–)-lasubine I, (–)-lasubine II and (+)-subcosine II
A. L. Gutman, M. Etinger, G. Nisnevich and F. Polyak	4369	Stereo- and regioselectivity in asymmetric synthesis of α-amino substituted benzocyclic compounds
A. Patti, G. Nicolosi, J. A. S. Howell and K. Humphries	4381	Synthesis of new ferrocenyl aminoalcohols and aminonitriles and catalytic properties of the aminoalcohols in the ethylation of benzaldehyde
A. C. Dahl and J. Ø. Madsen	4395	Baker's yeast: production of D- and L-3-hydroxy esters
P. Müller and H. Imogaï	4419	Rh(II)-catalyzed asymmetric cyclopropenation of propargyl derivatives; synthesis of cyclopropene- and *cis*-cyclopropane-amino acids
K. Nakamura, K. Takenaka and A. Ohno	4429	Lipase-catalyzed kinetic resolution of 3-butyn-2-ol
P. Besse, T. Sokoltchik and H. Veschambre	4441	Chemoenzymatic synthesis of α-halogeno-3-octanol and 4- or 5-nonanols. Application to the preparation of chiral epoxides
U. Lindemann, D. Wulff-Molder and P. Wessig	4459	Synthesis of ornithine lactams via diastereoselective photocyclization of 2-amino-4-oxo-4-phenyl-butanoyl amines
T. Kanger, K. Kriis, A. Paju, T. Pehk and M. Lopp	4475	Asymmetric oxidation of cyclobutanones: modification of the Sharpless catalyst
A. Luna, C. Astorga, F. Fülöp and V. Gotor	4483	Enzymatic resolution of (±)-*cis*-2-aminocyclopentanol and (±)-*cis*-2-aminocyclohexanol
	A619	Stereochemistry abstracts
	I	Instructions to contributors